TWIN STATE ENVIRONMENTAL CORP.
P.O. Box 719, Commercial Park, 1A Huntington Road, Richmond, VT 05477
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Phase (check one)	Type (check one)
☑ Site Investigation	☐ Work Scope
☐ Corrective Action Feasibility Investigation	☑ Technical Report
☐ Corrective Action Plan	☐ PCF Reimbursement Request
☐ Corrective Action Summary Report	☐ General Correspondence
☐ Operations & Monitoring Report	

INITIAL SITE INVESTIGATION REPORT

February 24, 1997

Crossroads Mobil
Route 78 and US Route 2
Alburg, Vermont

SMS Site #N/A
UST Facility #1617
TSEC #96-098

96-2124

Prepared for:
Mr. R.M. Vallee
c/o R.L. Vallee, Inc.
280 South Main Street, P.O. Box 192
St. Albans, Vermont 05478
(802) 524-8710

Written By:

Jon P. Berntsen
Geologist

Reviewed By:

John R. Diego
Vice President

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February 24, 1997

Mr. R.M. Vallee
c/o R.L. Vallee, Inc.
280 South Main Street
P.O. Box 192
St. Albans, Vermont 05478

RE: Initial Site Investigation
Crossroads Mobil, Alburg, Vermont
TSEC Project # 96-098, SMS Site #NA

Dear Mr. Vallee:

Enclosed is the Site Investigation Report that was prepared under the State of Vermont Agency of Natural Resources (ANR) Site Investigation Expressway Program at the above referenced SITE. This SITE was approved to participate in the program by the ANR on January 27, 1997.

Soil and groundwater contamination was observed in the former UST excavation during tank replacement activities in December 1996. Our recent subsurface investigation in January 1997 has also indicated that petroleum contamination, as a result of these former tanks, has impacted soil and groundwater beneath the SITE.

We have recommended that a comprehensive soil and groundwater investigation be conducted to fully delineate the extent of the gasoline, kerosene, and diesel contamination at the SITE. A Quarterly groundwater sampling program is also recommended.

Please call to discuss our findings or other matters of concern.

Very truly yours,
TWIN STATE ENVIRONMENTAL CORPORATION

Jon Berntsen

Jon P. Berntsen
Geologist

encl.
cc: Mr. Andrew Shively, State of Vermont, Sites Management Section

Crossroads Mobil
Alburg, Vermont
February 24, 1997

1.0 INTRODUCTION

This Initial Site Investigation (ISI) Report has been prepared by Twin State Environmental Corporation (TSEC) to present the findings of environmental conditions encountered during a recent subsurface site investigation at Crossroads Mobil in Alburg, Vermont (SITE) (see SITE Location Map, **Figure** 1). This investigation was initiated in response to conditions encountered during the removal of four (4) on-SITE underground storage tanks (USTs).

The two (2) USTs which contained kerosene and diesel fuel, were removed from the SITE on December 27, 1996 as part of a routine replacement. During the uncovering of the 4,000 gallon diesel UST, contaminated soil was encountered as indicated by elevated readings on a photoionization detector (PID). There were no positive PID readings above the 1,000 gallon kerosene tank.

During the subsequent removal and inspection of the USTs, two small diameter (¼-inch) holes were identified in the bottom of the diesel tank, and approximately two (2) gallons of free phase product was observed on top of the water table. Based on the amount of contamination present, it was determined that additional site work was necessary.

2.0 SCOPE OF SERVICES

The following scope of services were performed by TSEC during this investigation:

- Five (5) Geoprobe® borings were advanced to investigate soil and groundwater contamination resulting from the former USTs. Recovered soil samples were field screened using a ThermoEnvironmental Instruments Organic Vapor Meter (OVM) equipped with a 10.6 eV lamp.

- One (1) soil sample was collected and submitted for laboratory analysis at Endyne, Inc. of Williston, Vermont (Endyne) by USEPA Method 8260 for volatile organic compounds (VOCs).

- Three (3) 1½ x ¾-inch prepacked groundwater monitoring wells, and one (1) 1½-inch temporary monitoring well were installed into four (4) of these borings.

- Groundwater samples were collected from the four (4) newly installed monitoring wells, and submitted for analysis at Endyne by USEPA Method 8620 for VOCs.

- One (1) groundwater sample was collected from the on-SITE supply well and submitted for analysis at Endyne by USEPA Method 524.2 for VOCs.

- Elevations and locations of the four (4) on-SITE monitoring wells were surveyed. The data obtained has been used to create a site map, a groundwater flow map and contaminant concentration maps.

- A survey of sensitive receptors was conducted, focusing on surface water, residential basements (if present), and private drinking water wells.

- A summary report of the above-mentioned work was prepared.

3.0 SITE LOCATION AND DESCRIPTION

SITE Owner:	R.M. and Timothy Vallee
SITE Address:	Route 78 and US 2 Alburg, Vermont
Zoning:	Commercial
Utilities:	Water - On-SITE Well Sewer - On-SITE Septic Electric - Overhead connection Telephone - Underground connection
Structures:	One (1) single story convenience store and gasoline distribution business.

The SITE is located on the west side of Route 2, just north of Route 78 in Alburg, Vermont (see SITE Location Map, **Figure 1**). The building on-SITE is currently in use as a convenience store and retail gas station. The current USTs for the station are located along the northwest side of the convenience store and are covered by a concrete pad (see SITE Plan, **Figure 2**). These tanks consist of three (3) gasoline and one (1) diesel tank. Product is transferred by underground lines to the pump island on the north side of the convenience store. One aboveground kerosene tank and its associated pumping equipment is situated along the southwest corner of the building.

The site is commercially zoned and is situated in a mixed land use area. The properties adjacent to the site consist of a field to the northwest; Route 2 to the northeast; a barn to the southwest; and Route 78 to the southeast.

The topography of the site slopes towards the northeast. The nearest surface water, and potential receptor is a low lying wetland area located approximately 500 feet northeast of the SITE. Mud Creek, which feeds into Lake Champlain, flows to the south approximately 2,500 feet to the east of the SITE.

4.0 UST CLOSURES ON SITE

Three (3) USTs were removed from the SITE on August 2, 1989. These include one (1) 3,000-gallon diesel UST; one (1) 4,000-gallon gasoline UST; and one (1) 6,000-gallon gasoline UST. Tank removal oversight was provided by the State of Vermont, Agency of Natural Resources. These tanks were all reported to be leaking. Water samples were collected from two (2) adjacent supply wells and submitted for laboratory analysis. Several chlorinated compounds were discovered in the sample collected from the SITE supply well, but no gasoline affiliated compounds were reported. No further subsurface work was performed with respect to removal of these tanks.

Two (2) additional USTs were removed on December 27, 1996. These include one (1) 4,000 gallon diesel UST and one (1) 1,000 gallon kerosene UST. Both tanks were reported to have surface pitting. The diesel tank contained two (2) ¼-inch holes and was reported in poor condition. A pin hole was discovered in the kerosene tank; however, there was no evidence that the tank had been leaking.

As determined by visual observations and PID screening, areas of petroleum contamination were identified within the excavation. PID readings along the top and east sides of the diesel tank exhibited PID readings from 16.7 parts per million vapor (ppmv), directly above the tank, to 473 ppmv along the bottom of the tank. The soils encountered within the UST excavation consisted of 1½ ft of fill over relatively dry silty sand and till material to a depth of 7 feet below ground surface (ft bgs).

Contaminated groundwater was encountered at a depth of approximately 6.8 ft bgs. Approximately 2 gallons of free phase product was recovered from the groundwater surface. As the product and contaminated water was removed, clean water recharged into the tank cavity, indicating that the tank cavity may have been acting as a "bathtub," thus limiting the horizontal migration of product.

Additional excavation and investigation of the actual extent of contamination was not performed due to the depth of frost (1 ft), depth to bedrock, equipment present on SITE, proximity of the Route 2 right-of-way, and the need for repaving if the excavation was expanded. It was determined that soil borings advanced in the immediate vicinity of the former USTs would be adequate to delineate the extent of subsurface petroleum contamination.

5.0 SUBSURFACE EXPLORATION AND RESULTS

The subsurface exploration program was developed to gather data to provide a better understanding of the hydrogeology and contaminant distribution on SITE.

5.1 Advancement of Soil Borings

Five (5) soil borings were advanced using the Geoprobe® on January 31, 1997 by TSEC in locations indicated on **Figure 2**. Boring logs for these borings are presented in **Appendix A**. These borings were advanced to depths ranging from 8 to 12 feet bgs. All borings were logged, describing soil strata conditions, and analyzed with the PID using conventional headspace techniques.

General soil conditions encountered at the SITE consisted of silty sand and silty till material with some gravel. Groundwater was encountered between 5.1 and 7.1 ft bgs.

Contaminated soil was encountered during the installation of borings B-2 and B-3. A headspace analysis performed on the samples collected from B-2 indicated VOCs present at concentrations ranging from 22 to 162 ppmv. PID readings on samples collected from B-3 ranged from 136 to 983 ppmv. Both borings exhibited the highest readings in the sample collected between 4 and 8 ft bgs.

A product sheen was observed between 6.0 and 6.2 ft bgs in the sample retrieved from B-3. Based on the presence of this product, and a sweet odor uncharacteristic of petroleum compounds, a sample was collected from this interval and submitted to Endyne for analysis by USEPA Method 8260.

Samples collected from soil borings B-1, B-4 and B-4B did not exhibit any elevated PID readings. (Note: Soil boring B-4B was advanced adjacent to B-4 after refusal at 8.5 ft bgs in B-4.)

5.2 Monitor Well Installation

The four (4) above-mentioned borings were all converted into monitoring wells. Three (3) of the wells are 1½ x ¾-inch prepacked groundwater monitoring wells, and the remaining well is a 1½-inch temporary monitoring well. The wells were installed in the following locations and are depicted on the SITE Plan, **Figure 2**.

- Monitoring Well MW-1 was installed upgradient of the former UST cavity ;
- MW-2 was installed in the former UST cavity;
- MW-3 was installed to the north in the apparent downgradient direction of the former tank cavity; and,
- MW-4 was installed to the northwest in a crossgradient location from the former UST to monitor the lateral migration of contaminants.

Further construction details of the monitoring wells are presented below and in **Appendix A**: Boring Logs.

5.2.1 Monitor Well Construction

Three (3) of the newly installed wells are constructed of 1½ x ¾-inch schedule 40 polyvinylchloride (PVC) pre-packed monitoring wells with 0.010-inch machine slotted screen. These pre-packed monitoring wells consist of a ¾-inch inner screen surrounded by a clean sand filter pack, placed inside a 1½-inch outer screen, and a ¾-inch schedule 40 PVC riser. A bentonite seal is placed above the 1½-inch prepacked screen, and the well is sealed with a locking expansion plug and a curb box set in concrete that is flush grade.

The remaining well is a 1½-inch schedule 40 PVC well with a 0.010-inch machine slotted screen. Standard construction techniques were used that include placing a clean filter pack in the boring annulus around the screened interval; a bentonite seal; a locking expansion plug to seal the top of the PVC riser; and a curb box set in concrete that is flush grade. The depths of the wells range from 9.25 to 11.76 ft bgs.

5.3 SITE Geology

A summary of the predominate geological units encountered during drilling activities indicated a sandy fill material overlying silty sand and gravel till material with little clay. Refusal, a good indication of bedrock, was encountered between 8 and 12 ft bgs in borings B-4 and B-4B. The deepest sample that was collected from these borings contained a dark gray shale, consistent with observed bedrock outcroppings in the vicinity. For a more detailed description of geological units, see Boring Logs, **Appendix A**.

5.4 SITE Survey

A Topcon AT-G6 auto level was used to perform a stadia survey to identify the location of the newly installed monitoring wells with respect to existing site features. The collected data was used to update the SITE Plan (**Figure 2**) to include the location of the newly installed wells. The concrete base of the light pole on the southeast corner of the building was used as a benchmark and given an assumed elevation of 100 feet.

6.0 COLLECTION OF GROUNDWATER SAMPLES

Groundwater sampling was performed at this SITE by TSEC on February 10, 1997. Samples were collected from the newly installed wells MW-1, MW-2, MW-3, and MW-4, as well as the store supply well. The monitoring well samples were submitted to a certified laboratory for analysis by USEPA Method 8260 for VOCs, and the supply well sample was analyzed by USEPA Method 524.2.

6.1 Monitoring Well Sample Collection

Prior to sampling, depth to groundwater measurements were made in all of the wells. Depth to water ranged from 4.97 to 7.08 ft bgs at monitoring wells MW-1 and MW-3 respectively.

To allow for a representative groundwater sample, each well was purged of three (3) volumes of water with a new disposable bailer or using a low flow peristaltic pump with dedicated discharge line. Purge water from the wells was discharged directly to the ground surface. Sampling at each location was conducted using the bailer or pump. Bailers and discharge tubing were dedicated to the well.

Quality assurance/Quality control (QA/QC) samples incorporated into this sampling round included one (1) duplicate sample taken from monitor well MW-2 and one (1) field blank. The samples were analyzed via USEPA Method 8260 for VOCs. All chemical analyses for this round of groundwater sampling were performed by Endyne Inc. of Williston, Vermont. The results of the groundwater sampling round are discussed in the following sections.

6.2 Supply Well Sample Collection

A sample was collected from the new store supply well on February 3, 1997. This sample was collected from the pump discharge line at the point where the line enters the Crossroads Mobil building. Due to the large volume of water in the well and the inaccessibility of the well to obtain depth to water measurement, the well was not purged prior to sampling.

7.0 RESULTS OF SAMPLING ACTIVITIES

7.1 Soil Analytical Results

Analytical results received from Endyne indicated the presence of compounds affiliated with kerosene and diesel (see **Table 2**, Summary of Soil Analysis). However, after requesting Endyne to scan the sample chromatogram for several chlorinated compounds (1,1,2-TCA, 1,1,1-TCA, PCE, and TCE) that were suspected to be present, the compound PCE was discovered. Although the exact concentration could not be determined due to dilution factors and equipment detection limits, an acceptable estimate, based on the chromatogram (**Appendix B, Figure B-1**) and information supplied by the laboratory, is approximately 30 micrograms per kilograms (ug/kg) or parts per billion (ppb).

Based on this finding and the results of a sample analysis from the former store supply well in 1989, all subsequent laboratory analyses were expanded to include the abovementioned compounds in the target analyte list. USEPA Method 8260 was run on all groundwater samples collected from monitoring wells, and USEPA Method 524.2 was run on the supply well sample.

7.2 Groundwater Flow Direction

Groundwater levels on SITE were measured by TSEC personnel on February 10, 1997. As previously mentioned, depth to groundwater measurements ranged from 4.97 to 7.08 ft bgs at wells MW-1 and MW-3 respectively. A full analysis of groundwater elevation data is presented in **Table 1** (Summary of Groundwater Elevations).

Based on measured depths to groundwater observed in monitoring wells on SITE at the time of sampling, groundwater underlying the SITE has been calculated to flow to the north in the overburden aquifer. A graphical interpretation of the groundwater elevation data is presented on the Groundwater Contour Plan provided as **Figure 3**.

According to published hydraulic conductivity values for silt and clay, the subsurface materials encountered at the SITE, the hydraulic conductivity for the aquifer ranges between 0.003 feet per day (ft/d) and 3 ft/d (Fetter, 1994). Under the measured site hydraulic gradient of 0.048 ft/ft, the calculated apparent groundwater flow velocity beneath the site ranges from 0.0005 ft/d to 0.5 ft/d.

7.2 Groundwater Analytical Results

VOC results received from Endyne indicate that petroleum affiliated compounds are present in all four (4) monitoring wells. Benzene is present above its Maximum Contaminant Level (MCL) of 5 parts per billion (ppb) as promulgated by the USEPA in monitoring wells MW-2 and MW-3. MTBE is present above the Vermont Health Advisory (VHA) standard of 40 ppb in monitoring well MW-3. Duplicate results from MW-2 were also returned with benzene above the MCL.

The presence of MTBE and elevated levels of benzene indicate that there is contamination due to gasoline present in this portion of the SITE. An analysis of sample chromatograms indicates that there is a gasoline component present in the groundwater samples in addition to the diesel and kerosene contamination.

The complete analytical laboratory report from Endyne, including chromatograms, is provided as **Appendix C**; and graphical representations of the BTEX and MTBE distributions across the SITE are presented as **Figures 4** and **5**. Isoconcentration

contours have been omitted due to the apparent presence of gasoline compounds in the groundwater beneath the SITE.

7.2.1 QA/QC Results

The relative percent difference (RPD) was calculated for BTEX compounds present in MW-2 to be 7.41%, and the RPD for MTBE was calculated to be 0.71%. Both values are well within accepted value of 25% for RPD.

7.3 Supply Well Analytical Results

The supply well sample that was collected and analyzed for VOCs by EPA Method 524.2 did not indicate the presence of any VOCs at levels above their respective MCLs. No BTEX compounds or MTBE was detected. The complete analytical report from Endyne is included as **Appendix D** at the end of this report.

8.0 RECEPTOR EVALUATION

Following the removal of the USTs and the initial discovery of petroleum contamination at the SITE, a sensitive receptor evaluation was conducted in the immediate vicinity. This investigation focused on surface water receptors, groundwater supply wells, and residences.

Nine (9) groundwater supply wells were identified within a ½-mile radius of the SITE, and the drilling logs for seven (7) of these wells have been obtained. All of these wells are completed in the bedrock aquifer at depths ranging from 27 to 340 ft bgs, and none of these wells are directly downgradient of the SITE. The on-SITE supply well, located approximately 125 ft from the nucleus of the contamination has not been adversely affected by the release. Based on the depth of the contamination, the distance to the nearest groundwater well, and the low velocity of the groundwater flow, it does not appear that any wells in the vicinity, other than the store supply well, are at risk of becoming contaminated from the release.

The nearest surface water body is approximately 1,000 feet to the north of the SITE, and does not appear to be at risk from contamination migration. Additionally, there are no residential basements in the immediate vicinity of the SITE.

9.0 SUMMARY AND CONCLUSIONS

Based on the information and analytical data obtained during this investigation, TSEC concludes the following:

- The source of the contamination, the former USTs at the site, have been removed. New tanks are now in place.

- With groundwater contamination migrating to the north, away from all drinking water receptors in the immediate vicinity of the SITE (½-mile), there is little concern for impact to drinking water sources.

- The diesel and kerosene contamination appears to be localized in the immediate vicinity of the former USTs. Gasoline contamination, however, appears to be present, most likely residual from the 1989 tank removals.

- The presence of chlorinated compounds at the SITE has been confirmed (PCE at approximately 30 ppb). According to several local residents, a field to the west of the SITE was used as an airfield. Some maintenance work was reportedly conducted adjacent to the SITE.

10.0 RECOMMENDATIONS

Due to the presence of contamination in both soil and groundwater at the SITE, TSEC recommends the following:

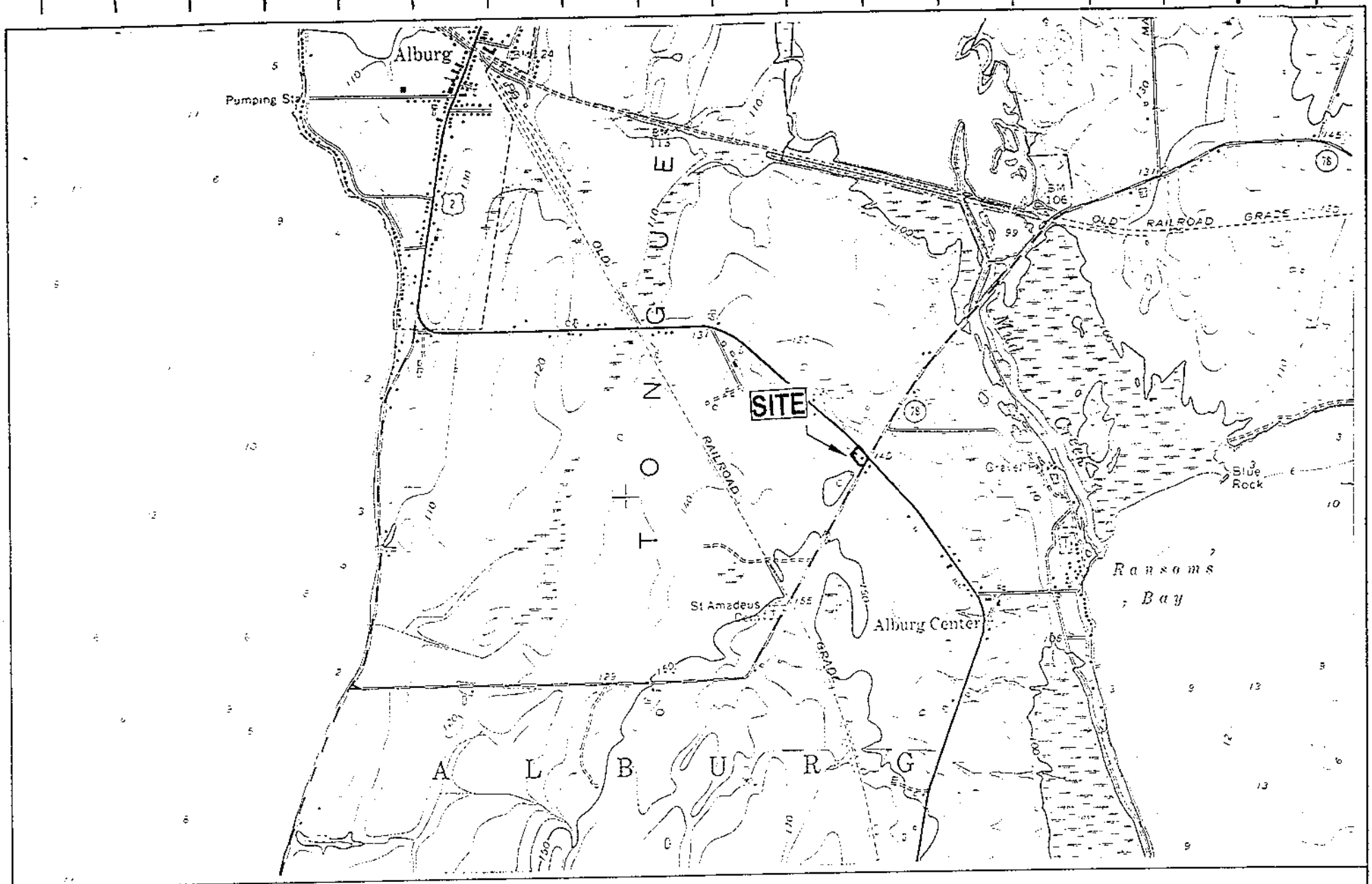
- Based on the extent of groundwater contamination present, a quarterly monitoring program is suggested. This program would include the sampling of the four (4) on-SITE groundwater monitoring wells and the new site supply well. The former supply well should be located and sampled.

- When sampling, it is imperative that the newly installed wells be properly purged. Three (3) well volumes of water should be evacuated from the wells, with the outer 1.5-inch diameter screen used to calculate purge volume.

- Based on the discovery of MTBE and elevated levels of benzene present in groundwater samples collected on-SITE, TSEC believes that a more adequate characterization of the SITE is necessary. There is apparently a gasoline contamination plume that has an unknown extend, and there is a possibility for chlorinated compounds to exist at the SITE.

  TSEC recommends conducting a comprehensive soil and groundwater investigation using a Geoprobe® and Mobile Laboratory to properly delineate the extent of the gasoline contamination as well as the kerosene and diesel contamination, and delineate the presence of chlorinated compounds.

FIGURES



N

0 2000

Scale (in feet) 1"=2,000'

Source: USGS 7.5 Minute Topographic Series
Alburg, Vermont Quadrangle

Project No: 96-098	
Designed By: pb	
Checked By:	
Approved By:	
Drawn By: pb	
Scale: as shown	
Date: 02/17/97	

TWIN STATE ENVIRONMENTAL CORP.
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Richmond, Vermont
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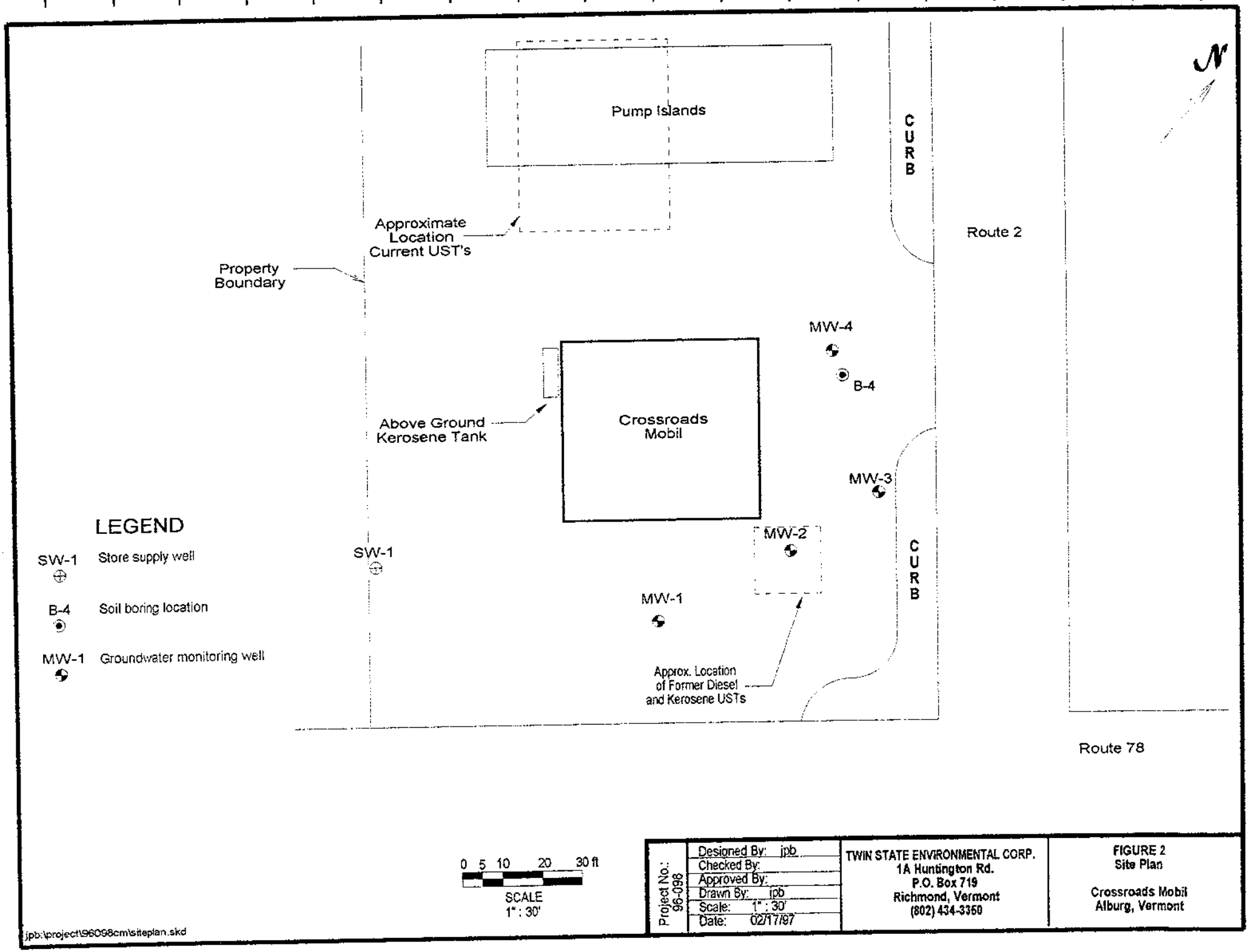
FIGURE 1
SITE LOCATION MAP

Crossroads Mobil
Alburg, Vermont


Pump Islands
CURB
Route 2
N
Approximate Location Current UST's
Property Boundary
MW-4
B-4
Above Ground Kerosene Tank
Crossroads Mobil
MW-3
MW-2
SW-1
CURB
MW-1
Approx. Location of Former Diesel and Kerosene USTs
Route 78
LEGEND
SW-1 Store supply well
B-4 Soil boring location
MW-1 Groundwater monitoring well
0 5 10 20 30 ft
SCALE 1" : 30'
Project No.: 96-098
Designed By: jpb
Checked By:
Approved By:
Drawn By: jpb
Scale: 1" : 30'
Date: 02/17/97
TWIN STATE ENVIRONMENTAL CORP.
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Richmond, Vermont
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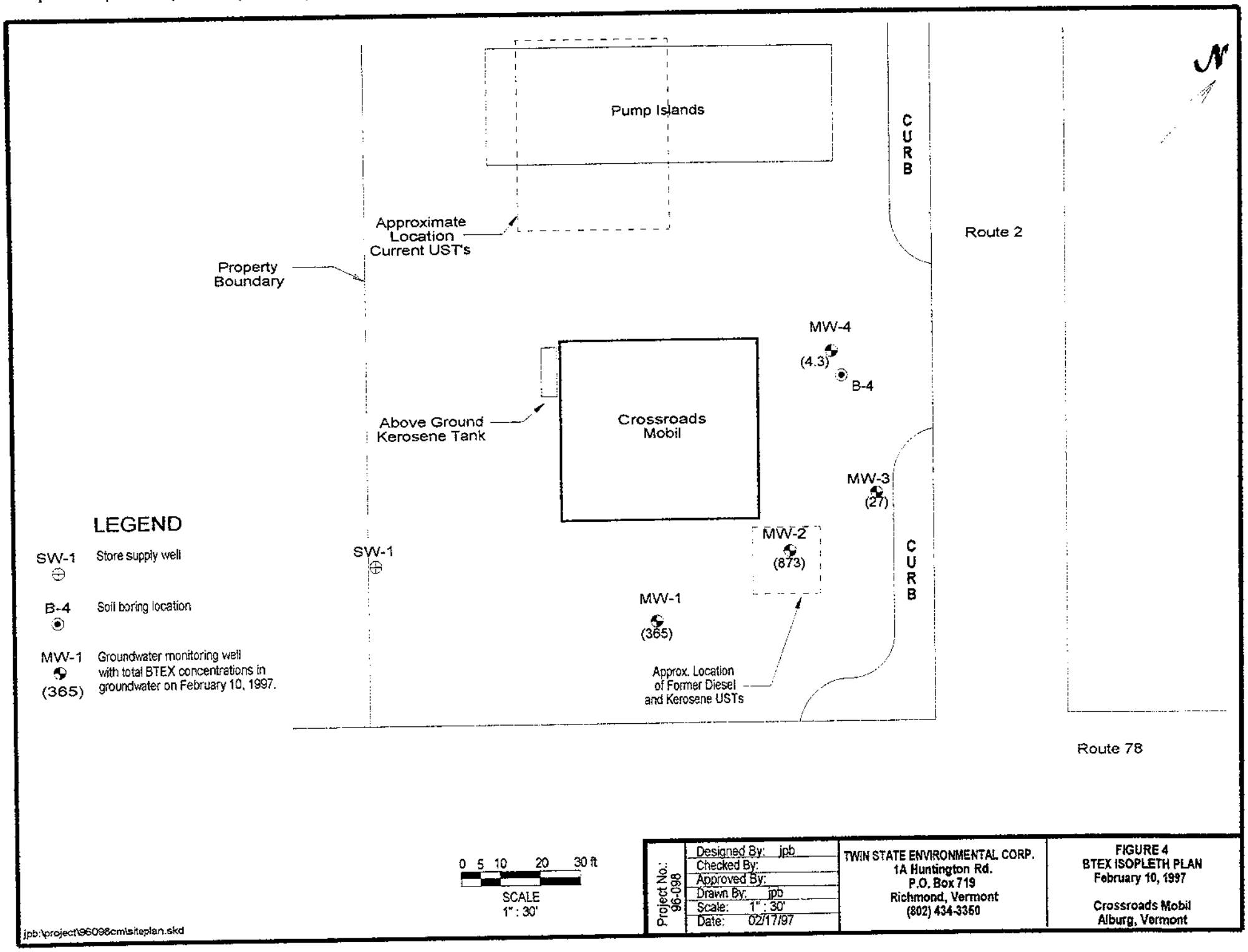
FIGURE 2
Site Plan
Crossroads Mobil
Alburg, Vermont
jpb:\project\96098cm\siteplan.skd



Project No.: 96-098	
Designed By:	jpb
Checked By:	
Approved By:	
Drawn By:	jpb
Scale:	1" : 30'
Date:	02/17/97

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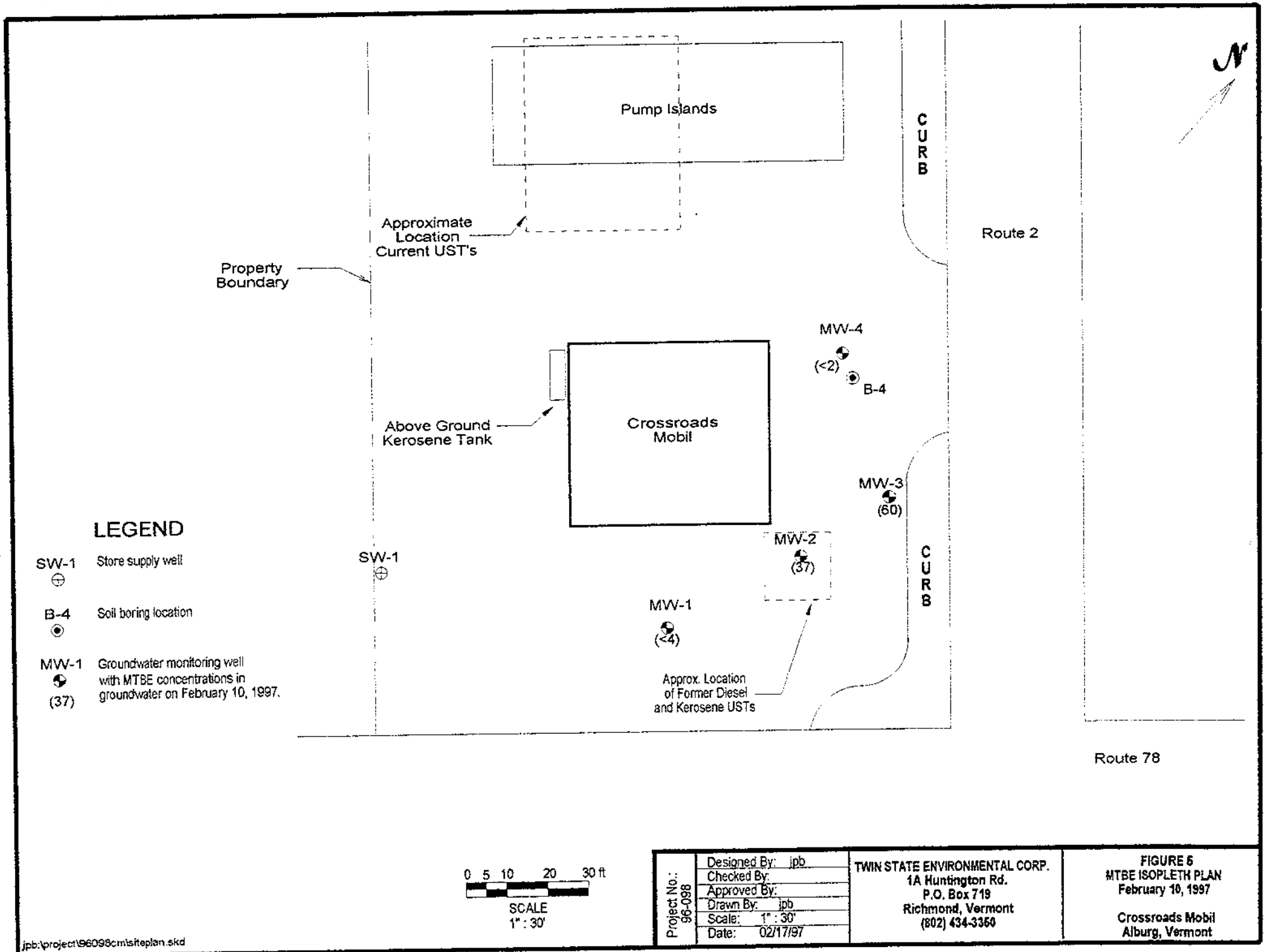
FIGURE 4
BTEX ISOPLETH PLAN
February 10, 1997

Crossroads Mobil
Alburg, Vermont

jpb:\project\96098cm\siteplan.skd



Project No.: 96-098	
Designed By:	jpb
Checked By:	
Approved By:	
Drawn By:	jpb
Scale:	1" : 30'
Date:	02/17/97

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FIGURE 6
MTBE ISOPLETH PLAN
February 10, 1997

Crossroads Mobil
Alburg, Vermont

jpb:\project\96098cm\siteplan.skd

TABLES

TABLE 1

SUMMARY OF GROUNDWATER ELEVATIONS

Crossroads Mobil
Alburg, Vermont

February 10, 1997

Well Identification	Top of Riser Elev.	Depth to Product	Depth to Water	Depth of Well	Thickness of Water in Well	Water Table Elev.
MW-1	91.09	ND	4.97	11.76	6.79	86.12
MW-2	90.51	ND	5.15	9.25	4.10	85.36
MW-3	90.18	ND	7.08	11.08	4.00	83.10
MW-4	90.40	ND	5.50	10.81	5.31	84.90

Notes:

kjb:\project\94168gm\0395wet.wb1

TABLE 2

SUMMARY OF SOIL ANALYSIS

Crossroads Mobil
Alburg, Vermont

January 31, 1997

Sample ID	B-3, 4'-8'
Parameter	Concentration (ppb)
Benzene	<100
Toluene	<100
Ethylbenzene	1,430
Total Xylenes	261
Total BTEX	1,691
MTBE	<200
Tetrachloroethene (PCE)	*≈30*[1]
sec-Butylbnzene	637
Isopropylbenzene	1,260
p-Isopropyltoluene	1,870
Naphthalene	1,370
n-Propylbenzene	3,340
1,2,4-Trimethylbenzene	751
1,3,5-Trimethylbenzene	7,250

Notes:

(1) Result is approximate. Presence confirmed through spectral analysis.
Soil sample was analyzed using EPA Method 8260.
Sample was collected from B-3, 4'-8' interval.

TABLE 4

SUMMARY OF SUPPLY WELL WATER QUALITY

Crossroads Mobil
Alburg, Vermont

February 3, 1997

Sample ID	MCL	SW-1
Parameter	Concentration (ppb)	
Benzene	5	<0.5
Toluene	1,000	<0.5
Ethylbenzene	700	<05
Total Xylenes	10,000	<1.0
Total BTEX	---	---
MTBE	40 (1)	<1.0
Bromomethane	---	2.9
Chloromethane	---	7.3
Trihalomethanes		
Bromodichloromethane	---	12.0
Bromoform	---	4.2
Chloroform	---	18.6
Dibromochloromethane	---	11.4
Total Trihalomethanes	100	46.2

Notes:

MCL - Maximum Contaminant Level promulgated by USEPA.
(1) - Vermont Health Advisory (VHA) standard for MTBE.
Supply well sample was analyzed using EPA Method 524.2.
Bold and italic numbers indicate concentrations that exceed MCL or VHA standards.
--- MCL not established for compound.

TABLE 3

SUMMARY OF GROUNDWATER QUALITY

Crossroads Mobil
Alburg, Vermont

February 10, 1997

Sample ID	MCL	MW-1	MW-2	MW-3	MW-4	DUP-1	FB
Parameter	Concentration (ppb)						
Benzene	5	<2	***15.2***	***9.8***	<1	***17.2***	<1
Toluene	1,000	<2	17.7	2.2	<1	17.9	<1
Ethylbenzene	700	41.5	194	9.1	<1	170	<1
Total Xylenes	10,000	323	646	5.9	4.3	735	<1
Total BTEX	---	364.5	872.9	27	4.3	940.1	--
MTBE	40 (1)	<4	36.7	***60.4***	<2	36.2	<2
sec-Butylbenzene	---	<2	3.4	9.9	<1	2.2	<1
Isopropylbenzene	---	<2	4.2	9.2	<1	3.6	<1
p-Isopropyltoluene	---	<2	18.2	23.9	<1	14.9	<1
Naphthalene	---	<10	33.3	<5	<5	41.6	<1
n-Propylbenzene	---	<2	3.4	6.6	<1	2.9	<1
1,2,4-Trimethylbenzene	---	<2	46.4	9.5	<1	41.9	<1
1,3,5-Trimethylbenzene	---	<2	36.4	65	<1	29.8	<1

Notes:
MCL - Maximum Contaminant Level promulgated by USEPA.
(1) - Vermont Health Advisory (VHA) standard for MTBE.
All monitor well samples were analyzed using EPA Method 8260.
Bold and italic numbers indicate concentrations that exceed MCL or VHA standards.
--- MCL not established for compound.

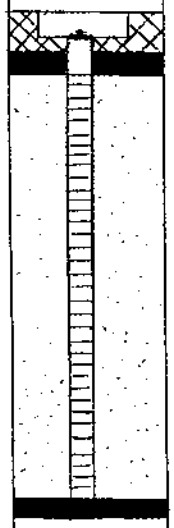
APPENDIX A

TWIN STATE ENVIRONMENTAL CORPORATION

1A Huntington Road, P.O. Box 719 Richmond, Vermont 05477
(802) 434-3350 FAX: (802) 434-4478

MONITORING WELL/SOIL BORING LOG

WELL/BORING NO:	MW-1	WELL DEPTH: 11.76 ft	BORING DEPTH: 12.0 ft
PROJECT NAME:	Crossroads Mobil	DEPTH TO WATER:	4.97 ft on 2/10/97
PROJECT NO:	96-098	SCREEN DIA: 1¼-inch	DEPTH: 11.76 to 1.76 ft
INSTALL DATE:	January 31, 1997	SCREEN TYPE/SIZE:	0.010 slot PVC
TSEC REP:	Jon Berntsen	RISER TYPE:	Schedule 40 PVC
DRILLING CO:	TSEC	RISER DIA.: 1¼-inch	DEPTH: 1.76 to 0.5 ft
DRILLING METHOD:	Geoprobe®	GUARD TYPE:	Flush mount road box set in concrete
SAMPLING METHOD:	Macrocore	RISER CAP:	Expansion plug
REMARKS:	None		

DEPTH IN FEET	WELL PROFILE	SAMPLE DEPTH (FT)	PID (PPMV)	BLOWS/6" AND RECOVERY	SOIL DESCRIPTION AND NOTES
0		0-2 ft	N/A	Auger thru fill	0.0-2.0:SAND, SILT, and GRAVEL fill material. Brown, dry.
1		2-4 ft	1.9 ppmv	2.0 ft recovery	2.0-3.0:SAND, SILT, and GRAVEL fill material. Brown, dry.
2					3.0-3.5:GRAVEL, fine; sand, medium to coarse; and clay, grey.
3					3.5-4.0: SAND, fine to very fine. Grey, dry.
4		4-8 ft	<1 ppmv	3.5 ft recovery	4.0-4.5:SAND, medium to coarse, SILT, and GRAVEL. Brown, moist.
5					4.5-6.5:SAND, medium to fine; some gravel. Brown, wet.
6					6.5-7.5:SAND, medium to fine; some silt. Brown, wet.
7					
8		8-12 ft	<1 ppmv	4.0 ft recovery	8.0-11.0:SAND, SILT, and GRAVEL till material. Grey, wet.
9					11.0-12.0:SAND, medium to fine. Brown, wet.
10					
11					
12					End of Boring: 12.0 ft
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

LEGEND: CEMENT GROUT; NATIVE BACKFILL; BENTONITE SEAL; SAND PACK; WELL SCREEN; RISER PIPE; HS HEAD SPACE; WATER LEVEL (APPROX)

GRANULAR SOILS	
BLOWS/FT	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	M.DENSE
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT	DENSITY
<2	V.SOFT
2-4	SOFT
4-8	M.STIFF
8-15	STIFF
15-30	V.STIFF
>30	HARD

PROPORTIONS USED	
TRACE	0-10%
LITTLE	10-20%
SOME	20-35%
AND	35-50%

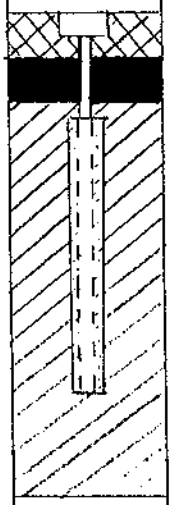
NOTES:
1. Well is located upgradient of USTs.
2. PID readings were obtained using a Thermo Environmental Instruments Model 580 B PID equipped with a 10.6eV lamp. Conventional headspace techniques were used.

TWIN STATE ENVIRONMENTAL CORPORATION

1A Huntington Road, P.O. Box 719 Richmond, Vermont 05477
(802) 434-3350 FAX: (802) 434-4478

MONITORING WELL/SOIL BORING LOG

WELL/BORING NO:	MW-2	WELL DEPTH: 9.28 ft	BORING DEPTH: 12.0 ft
PROJECT NAME:	Crossroads Mobil	DEPTH TO WATER:	5.15 ft on 2/10/97
PROJECT NO:	96-098	SCREEN DIA: ¾-inch	DEPTH: 9.28 to 2.28 ft
INSTALL DATE:	January 31, 1997	SCREEN TYPE/SIZE:	0.010 slot PVC
TSEC REP:	Jon Berntsen	RISER TYPE:	Schedule 40 PVC
DRILLING CO:	TSEC	RISER DIA.: ¾-inch	DEPTH: 2.28 to 0.5 ft
DRILLING METHOD:	Geoprobe®	GUARD TYPE:	Flush mount road box set in concrete
SAMPLING METHOD:	Macrocore	RISER CAP:	Expansion plug
REMARKS:	None		

DEPTH IN FEET	WELL PROFILE	SAMPLE DEPTH (FT)	PID (PPMV)	BLOWS/6" AND RECOVERY	SOIL DESCRIPTION AND NOTES
0		0-2 ft	N/A	Auger thru fill	0.0-2.0:SAND, and GRAVEL fill material. Brown, dry.
1		2-4 ft	N/A	2.0 ft recovery	2.0-4.0:SAND, and GRAVEL fill material. Brown, dry.
2					
3					
4		4-8 ft	162 ppmv	3.0 ft recovery	4.0-7.0: SAND, and GRAVEL fill material. Brown, Wet at 5 ft.
5					
6					
7					
8		8-12 ft	22 ppmv	4.0 ft recovery	8.0-9.0: SAND, and GRAVEL fill material. Brown, dry.
9					9.0-12.0:SAND, medium to fine. Brown, wet.
10					
11					
12					End of Boring: 12.0 ft
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

LEGEND

- CEMENT GROUT
- NATIVE BACKFILL
- BENTONITE SEAL
- SAND PACK
- WELL SCREEN
- RISER PIPE
- HS HEAD SPACE
- WATER LEVEL (APPROX)

GRANULAR SOILS	
BLOWS/FT	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	M.DENSE
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT	DENSITY
<2	V.SOFT
2-4	SOFT
4-8	M.STIFF
8-15	STIFF
15-30	V.STIFF
>30	HARD

PROPORTIONS USED	
TRACE	0-10%
LITTLE	10-20%
SOME	20-35%
AND	35-50%

NOTES:

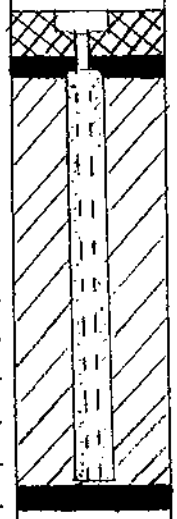
1. Well is located in former UST excavation.
2. PID readings were obtained using a Thermo Environmental Instruments Model 580 B PID equipped with a 10.6eV lamp. Conventional headspace techniques were used.

TWIN STATE ENVIRONMENTAL CORPORATION

1A Huntington Road, P.O. Box 719 Richmond, Vermont 05477
(802) 434-3350 FAX: (802) 434-4478

MONITORING WELL/SOIL BORING LOG

WELL/BORING NO:	MW-3	WELL DEPTH: 11.08 ft	BORING DEPTH: 12.0 ft
PROJECT NAME:	Crossroads Mobil	DEPTH TO WATER:	7.08 ft on 2/10/97
PROJECT NO:	96-098	SCREEN DIA: ¾-inch	DEPTH: 11.08 to 1.08 ft
INSTALL DATE:	January 31, 1997	SCREEN TYPE/SIZE:	0.010 slot PVC
TSEC REP:	Jon Berntsen	RISER TYPE:	Schedule 40 PVC
DRILLING CO:	TSEC	RISER DIA.: ¾-inch	DEPTH: 1.08 to 0.5 ft
DRILLING METHOD:	Geoprobe®	GUARD TYPE:	Flush mount road box set in concrete
SAMPLING METHOD:	Macrocore	RISER CAP:	Expansion plug
REMARKS:	None		

DEPTH IN FEET	WELL PROFILE	SAMPLE DEPTH (FT)	PID (PPMV)	BLOWS/6" AND RECOVERY	SOIL DESCRIPTION AND NOTES
0		0-2 ft	N/A	Auger thru fill	0.0-2.0:SAND, and GRAVEL fill material. Brown, dry.
1		2-4 ft	136 ppmv	2.0 ft recovery	2.0-4.0:SAND, fine to very fine; some gravel. Brown, dry.
2					
3					
4		4-8 ft	983 ppmv	4.0 ft recovery	4.0-7.0:SAND, medium to coarse, some silt; some gravel. Brown, moist.
5					7.0-8.0:SAND, medium to fine. Heavy product sheen. Brown, wet. Heavy PHC odor.
6					
7					
8		8-12 ft	928 ppmv	4.0 ft recovery	8.0-10.0:SAND, medium to coarse.
9					10.0-10.5:GRAVEL, fine; some medium sand. Brown, wet.
10					10.5-11.0:SAND, medium to coarse; some gravel; little silt; trace clay. Brown, wet.
11					11.0-12.0: Weathered Shale BEDROCK.
12					End of Boring: 12.0 ft
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

LEGEND

- CEMENT GROUT
- NATIVE BACKFILL
- BENTONITE SEAL
- SAND PACK
- WELL SCREEN
- RISER PIPE
- HS HEAD SPACE
- WATER LEVEL (APPROX)

GRANULAR SOILS	
BLOWS/FT	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	M.DENSE
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT	DENSITY
<2	V.SOFT
2-4	SOFT
4-8	M.STIFF
8-15	STIFF
15-30	V.STIFF
>30	HARD

PROPORTIONS USED	
TRACE	0-10%
LITTLE	10-20%
SOME	20-35%
AND	35-50%

NOTES:

1. Well is located downgradient of USTs.
2. PID readings were obtained using a Thermo Environmental Instruments Model 580 B PID equipped with a 10.6eV lamp. Conventional headspace techniques were used.

TWIN STATE ENVIRONMENTAL CORPORATION

1A Huntington Road, P.O. Box 719 Richmond, Vermont 05477
(802) 434-3350 FAX: (802) 434-4478

MONITORING WELL/SOIL BORING LOG

WELL/BORING NO:	MW-4	WELL DEPTH: 10.81ft	BORING DEPTH: 12.0 ft
PROJECT NAME:	Crossroads Mobil	DEPTH TO WATER:	5.50 ft on 2/10/97
PROJECT NO:	96-098	SCREEN DIA: ¾-inch	DEPTH: 10.81 to 0.81 ft
INSTALL DATE:	January 31, 1997	SCREEN TYPE/SIZE: 0.010 slot PVC	
TSEC REP:	Jon Berntsen	RISER TYPE: Schedule 40 PVC	
DRILLING CO:	TSEC	RISER DIA.: ¾-inch	DEPTH: 0.81 to 0.0 ft
DRILLING METHOD:	Geoprobe®	GUARD TYPE: Flush mount road box set in concrete	
SAMPLING METHOD:	Macrocore	RISER CAP: Expansion plug	
REMARKS:	None		

DEPTH IN FEET	WELL PROFILE	SAMPLE DEPTH (FT)	PID (PPMV)	BLOWS/6" AND RECOVERY	SOIL DESCRIPTION AND NOTES
0		0-2 ft	N/A	Auger thru fill	0.0-2.0:SAND, SILT, and GRAVEL fill material. Brown, dry.
1		2-4 ft	16.6 ppmv	2.0 ft recovery	2.0-4.0:SAND, and GRAVEL fill material. Brown, dry.
2					
3					
4		4-8 ft	3.2 ppmv	4.0 ft recovery	4.0-6.0:SAND, fine to medium; some clay, silt, and gravel (Till).
5					6.0-6.5:Shale fragments. Grey.
6					6.5-7.5: SAND, fine to medium; some clay, silt, and gravel (Till).
7					7.5-7.8:Shale fragments, Grey.
8		8-12 ft	2.2 ppmv	4.0 ft recovery	7.8-8.0:SAND, medium. Black wet.
9					8.0-12.0: SAND, fine to medium; some clay, silt, and gravel (Till).
10					
11					
12					End of Boring: 12.0 ft
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

LEGEND

- CEMENT GROUT
- NATIVE BACKFILL
- BENTONITE SEAL
- SAND PACK
- WELL SCREEN
- RISER PIPE
- HS HEAD SPACE
- WATER LEVEL (APPROX)

GRANULAR SOILS	
BLOWS/FT	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	M.DENSE
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT	DENSITY
<2	V.SOFT
2-4	SOFT
4-8	M.STIFF
8-15	STIFF
15-30	V.STIFF
>30	HARD

PROPORTIONS USED	
TRACE	0-10%
LITTLE	10-20%
SOME	20-35%
AND	35-50%

NOTES:

1. Well is located crossgradient of USTs.
2. PID readings were obtained using a Thermo Environmental Instruments Model 580 B PID equipped with a 10.6eV lamp. Conventional headspace techniques were used.

APPENDIX B

ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

REPORT OF LABORATORY ANALYSIS

CLIENT: Twin State Environmental Corp.
PROJECT NAME: Crossroads Mobil
REPORT DATE: February 3, 1997
DATE SAMPLED: January 31, 1997

PROJECT CODE: TSEC1803
REF.#: 99,460

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody.

Chain of custody did not indicate sample preservation.

All samples were prepared and analyzed by requirements outlined in the referenced method and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced method.

Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Individual sample performance was monitored by the addition of surrogate analytes to each sample. All surrogate recovery data was determined to be within Laboratory QA/QC guidelines unless otherwise noted.

Reviewed by,

for
Harry B. Locker, Ph.D.
Laboratory Director

enclosures

ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

EPA METHOD 8260 SOIL MATRIX

CLIENT: Twin State Environmental Corp.
PROJECT NAME: Crossroads Mobil
REPORT DATE: February 3, 1997
DATE SAMPLED: January 31, 1997
DATE RECEIVED: February 3, 1997
ANALYSIS DATE: February 3, 1997

PROJECT CODE: TSEC1803
REF.#: 99,460
STATION: MW-3 4-8
TIME SAMPLED: 12:20
SAMPLER: Jon Berntsen

Parameter	Detection Limit (ug/kg)[1]	Result as received(ug/kg)	Parameter	Detection Limit (ug/kg)	Result as received(ug/kg)
Benzene	100	ND[2]	1,3-Dichloropropane	100	ND
Bromobenzene	100	ND	2,2-Dichloropropane	100	ND
Bromochloromethane	200	ND	1,1-Dichloropropene	100	ND
Bromodichloromethane	100	ND	cis-1,3-Dichloropropene	100	ND
Bromoform	100	ND	trans-1,3-Dichloropropene	100	ND
Bromomethane	500	ND	Ethylbenzene	100	1,430.
n-Butylbenzene	100	ND	Hexachlorobutadiene	500	ND
sec-Butylbenzene	100	637.	Isopropylbenzene	100	1,260.
tert-Butylbenzene	100	ND	p-Isopropyltoluene	100	1,870.
Carbon Tetrachloride	100	ND	Methylene Chloride	500	ND
Chlorobenzene	100	ND	Naphthalene	500	1,370.
Chloroethane	500	ND	n-Propylbenzene	100	3,340.
Chloroform	100	ND	Styrene	200	ND
Chloromethane	1000	ND	1,1,1,2-Tetrachloroethane	200	ND
2&4-Chlorotoluene	200	ND	1,1,2,2-Tetrachloroethane	200	ND
Dibromochloromethane	100	ND	Tetrachloroethene	100	ND
1,2-Dibromo-3-Chloropropane	200	ND	Toluene	100	ND
1,2-Dibromoethane	200	ND	1,2,3-Trichlorobenzene	200	ND
Dibromomethane	200	ND	1,2,4-Trichlorobenzene	200	ND
1,2-Dichlorobenzene	100	ND	1,1,1-Trichloroethane	100	ND
1,3-Dichlorobenzene	100	ND	1,1,2-Trichloroethane	100	ND
1,4-Dichlorobenzene	100	ND	Trichloroethene	100	ND
Dichlorodifluoromethane	1000	ND	Trichlorofluoromethane	200	ND
1,1-Dichloroethane	100	ND	1,2,3-Trichloropropane	100	ND
1,2-Dichloroethane	100	ND	1,2,4-Trimethylbenzene	100	751.
1,1-Dichloroethene	100	ND	1,3,5-Trimethylbenzene	100	7,250.
cis-1,2-Dichloroethene	100	ND	Vinyl Chloride	500	ND
trans-1,2-Dichloroethene	100	ND	Total Xylenes	200	261.
1,2-Dichloropropane	100	ND	MTBE	200	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: >10

PERCENT SOLID: 88.%

ANALYTICAL SURROGATE RECOVERY:
Dibromofluoromethane : 97.%
Toluene-d8 : 87.%
4-Bromofluorobenzene : 108.%

NOTES:
1 Detection limit raised due to high levels of contaminants. Sample run at a 10% dilution.
2 None detected

ENDYNE, INC.

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333

20340

CHAIN-OF-CUSTODY RECORD

Project Name: CROSSROADS MOBIL Site Location: ALBURG, VERMONT	Reporting Address: P.O. BOX 719 RICHMOND, VERMONT 05477	Billing Address: P.O. BOX 719 RICHMOND, VT 05477
Endyne Project Number: TSEC 1803	Company: TSEC Contact Name/Phone #: JOHN DIEGO 434 3350	Sampler Name: JON BERNTSEN Phone #: (802) 434-3350

Lab #	Sample Location	Matrix	GRAB	COMP	Date/Time	Sample Containers No.	Sample Containers Type/Size	Field Results/Remarks	Analysis Required	Sample Preservation	Rush
9960	MW-3 4-8	SOIL	✓		1/31/97/12.20	1	8oz GLASS		8260		

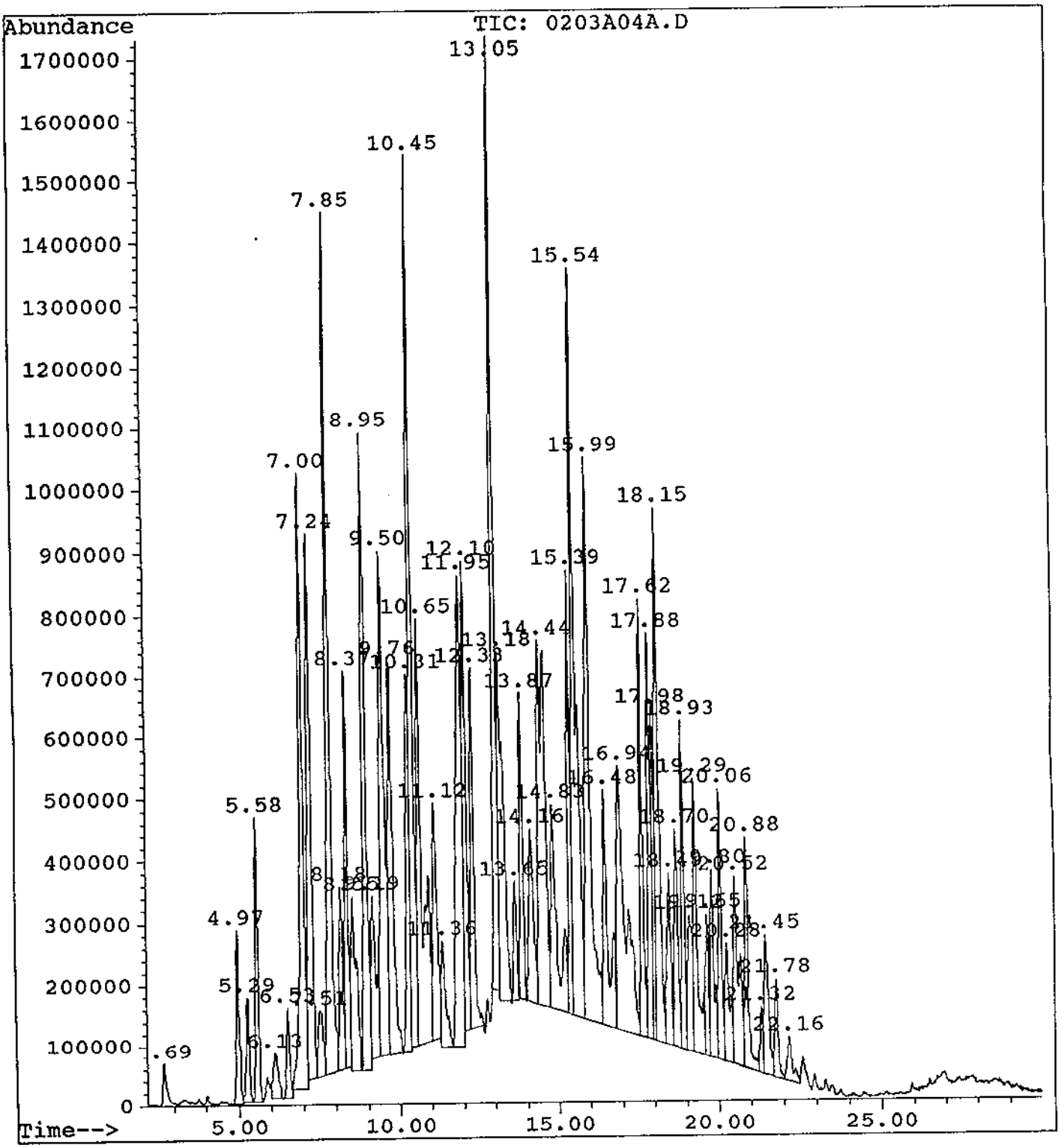
Relinquished by: Signature Jon P. B	Received by: Signature E Pan J	Date/Time 2/3/97 12:30
Relinquished by: Signature	Received by: Signature	Date/Time

New York State Project: Yes ____ No ____

Requested Analyses

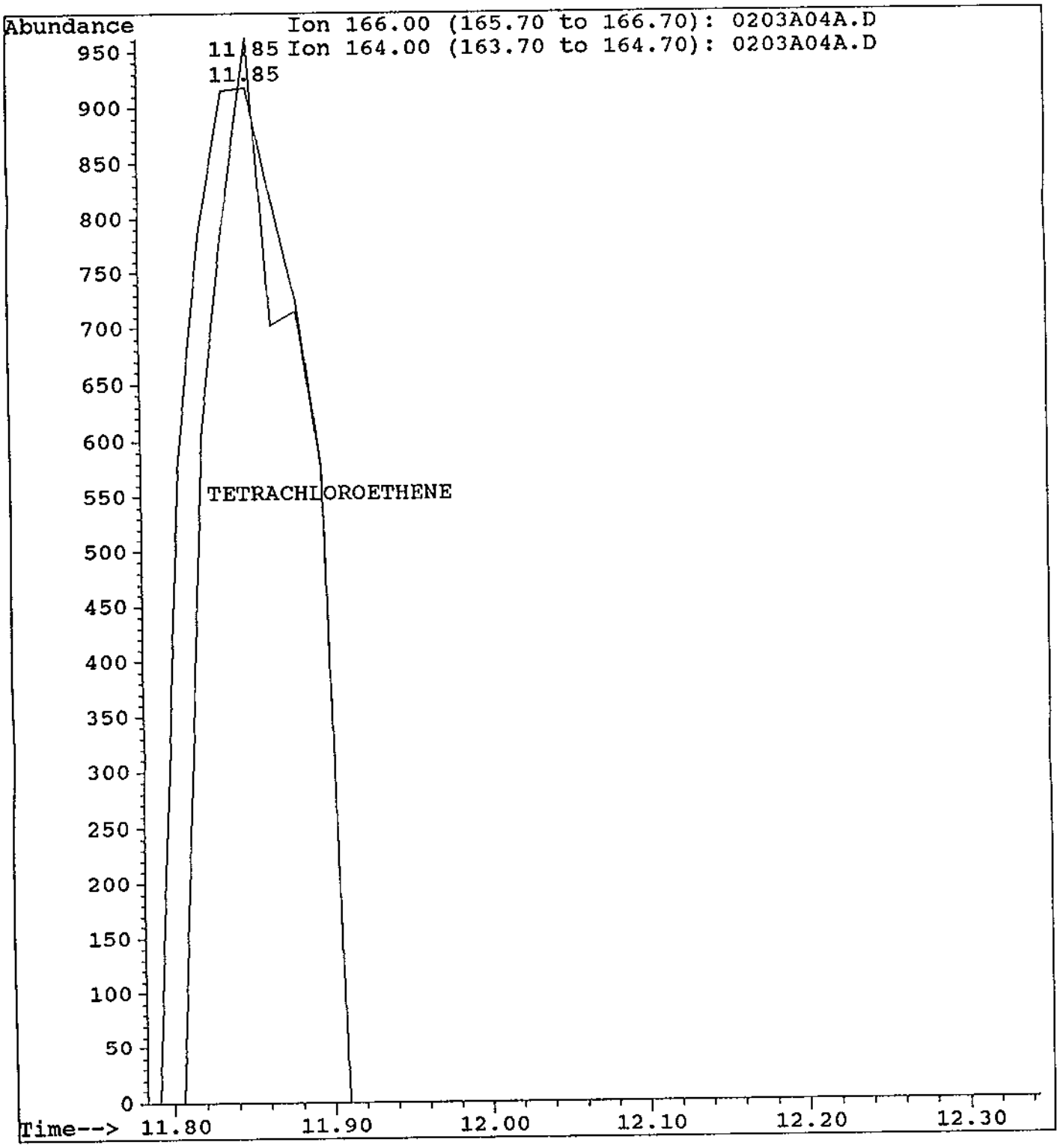
1	pH	6	TKN	11	Total Solids	16	Metals (Specify)	21	EPA 624	26	EPA 8270 B/N or Acid
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	EPA 625 B/N or A	27	EPA 8010/8020
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8080 Pest/PCB
4	Nitrite N	9	BOD_5	14	Turbidity	19	BTEX	24	EPA 608 Pest/PCB		
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240		
29	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										
30	Other (Specify):										

File : 0203A04A.D
Sample Name : tsec mw 3 50uL 10.13g 10ml meth (MeOH)
Current Method: 826-0109.M
Instrument : MS_5970
Acquired : 3 Feb 97 2:46 pm
Date of report: 02/04/97
Operator : ep



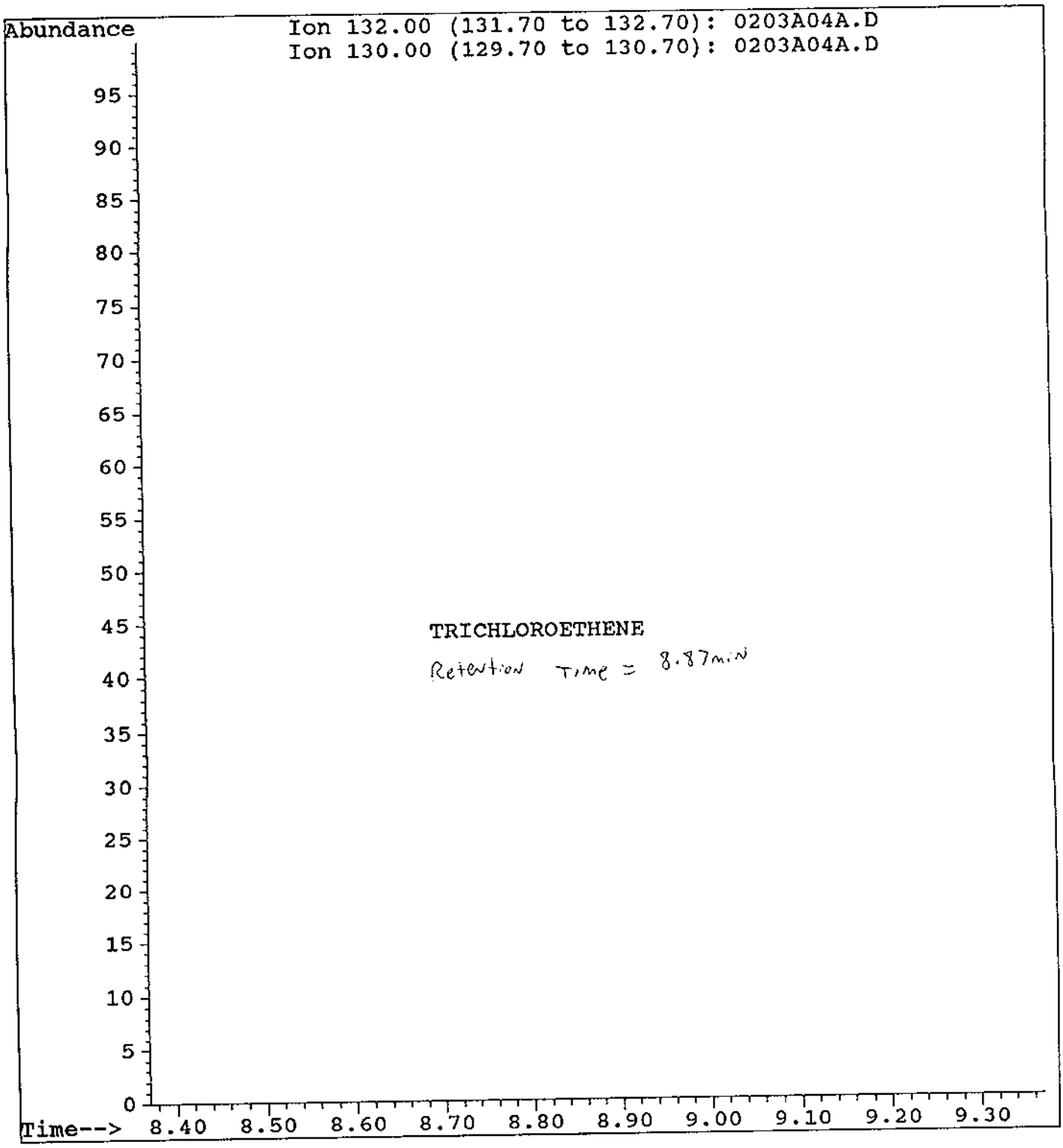
File : 0203A04A.D
Sample Name : tsec mw 3 50uL 10.13g 10ml ~~meih~~ meOH
Current Method: 826-0109.M
Instrument : MS_5970
Acquired : 3 Feb 97 2:46 pm
Date of report: 02/04/97
Operator : ep

Present - Less than Detection



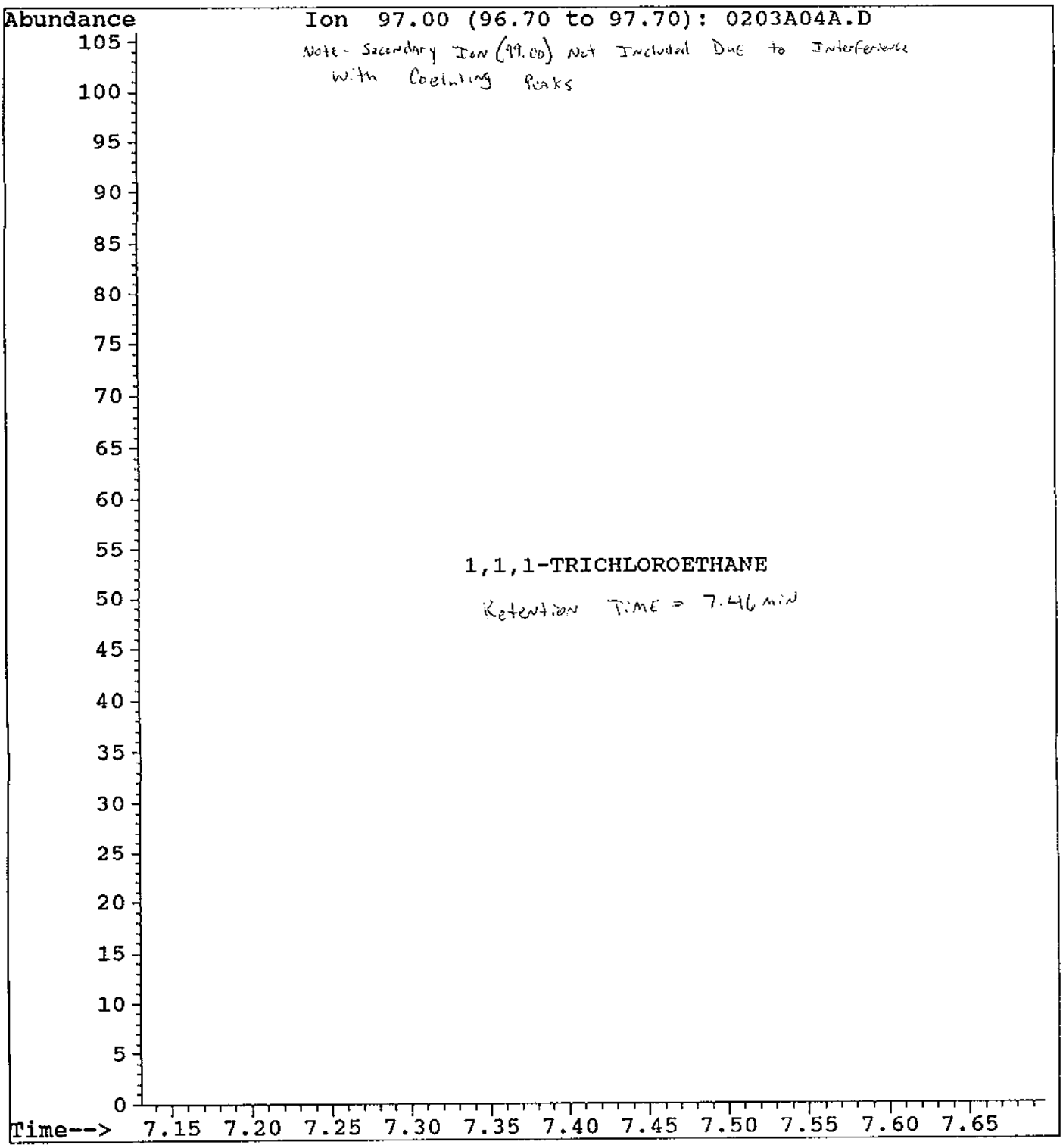
File : 0203A04A.D
Sample Name : tsec mw 3 50uL 10.13g 10ml ~~meth~~ MeOH
Current Method: 826-0109.M
Instrument : MS_5970
Acquired : 3 Feb 97 2:46 pm
Date of report: 02/04/97
Operator : ep

Not Present At This Dilution



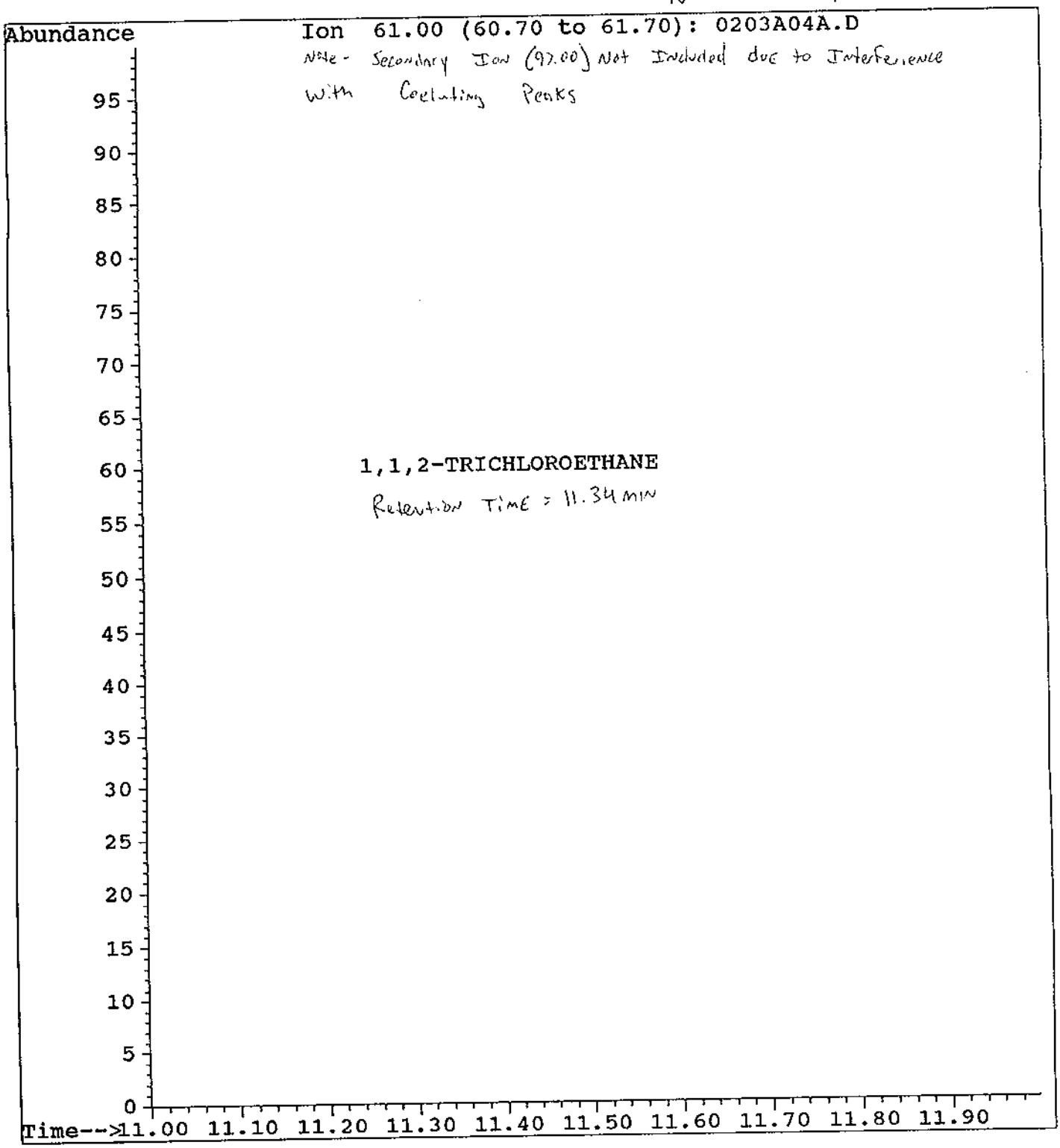
File : 0203A04A.D
Sample Name : tsec mw 3 50uL 10.13g 10ml meih
Current Method: 826-0109.M
Instrument : MS_5970
Acquired : 3 Feb 97 2:46 pm
Date of report: 02/04/97
Operator : ep

Not Present At This Dilution



File : 0203A04A.D
Sample Name : tsec mw 3 50uL 10.13g 10ml ~~meih~~ meOH
Current Method: 826-0109.M
Instrument : MS_5970
Acquired : 3 Feb 97 2:46 pm
Date of report: 02/04/97
Operator : ep

Not present at this dilution



APPENDIX C

FEB 20

ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

REPORT OF LABORATORY ANALYSIS

CLIENT: Twin State Environmental Corp.
PROJECT NAME: Cross Roads Mobil
REPORT DATE: February 18, 1997
DATE SAMPLED: February 10, 1997

PROJECT CODE: TSEC1945
REF. #: 99,859 - 99,864

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody.

Chain of custody indicated sample preservation with HCl.

All samples were prepared and analyzed by requirements outlined in the referenced method and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced method.

Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Individual sample performance was monitored by the addition of surrogate analytes to each sample. All surrogate recovery data was determined to be within Laboratory QA/QC guidelines unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

enclosures

ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

EPA METHOD 8260 WATER MATRIX

CLIENT: Twin State Environmental Corp.
PROJECT NAME: Cross Roads Mobil
REPORT DATE: February 18, 1997
DATE SAMPLED: February 10, 1997
DATE RECEIVED: February 10, 1997
ANALYSIS DATE: February 18, 1997

PROJECT CODE: TSEC1945
REF.#: 99,859
STATION: MW-1
TIME SAMPLED: 13:35
SAMPLER: Rod Lindsay

Parameter	Detection Limit (ug/L)[1]	Result (ug/L)	Parameter	Detection Limit (ug/L)	Result (ug/L)
Benzene	2	ND[2]	1,3-Dichloropropane	2	ND
Bromobenzene	2	ND	2,2-Dichloropropane	2	ND
Bromochloromethane	4	ND	1,1-Dichloropropene	2	ND
Bromodichloromethane	2	ND	cis-1,3-Dichloropropene	2	ND
Bromoform	2	ND	trans-1,3-Dichloropropene	2	ND
Bromomethane	10	ND	Ethylbenzene	2	41.5
n-Butylbenzene	2	ND	Hexachlorobutadiene	10	ND
sec-Butylbenzene	2	ND	Isopropylbenzene	2	ND
tert-Butylbenzene	2	ND	p-Isopropyltoluene	2	ND
Carbon Tetrachloride	2	ND	Methylene Chloride	10	ND
Chlorobenzene	2	ND	Naphthalene	10	ND
Chloroethane	10	ND	n-Propylbenzene	2	ND
Chloroform	2	ND	Styrene	4	ND
Chloromethane	20	ND	1,1,1,2-Tetrachloroethane	4	ND
2&4-Chlorotoluene	4	ND	1,1,2,2-Tetrachloroethane	4	ND
Dibromochloromethane	2	ND	Tetrachloroethene	2	ND
1,2-Dibromo-3-Chloropropane	4	ND	Toluene	2	ND
1,2-Dibromoethane	4	ND	1,2,3-Trichlorobenzene	4	ND
Dibromomethane	4	ND	1,2,4-Trichlorobenzene	4	ND
1,2-Dichlorobenzene	2	ND	1,1,1-Trichloroethane	2	ND
1,3-Dichlorobenzene	2	ND	1,1,2-Trichloroethane	2	ND
1,4-Dichlorobenzene	2	ND	Trichloroethene	2	ND
Dichlorodifluoromethane	20	ND	Trichlorofluoromethane	4	ND
1,1-Dichloroethane	2	ND	1,2,3-Trichloropropane	2	ND
1,2-Dichloroethane	2	ND	1,2,4-Trimethylbenzene	2	ND
1,1-Dichloroethene	2	ND	1,3,5-Trimethylbenzene	2	ND
cis-1,2-Dichloroethene	2	ND	Vinyl Chloride	10	ND
trans-1,2-Dichloroethene	2	ND	Total Xylenes	4	323.
1,2-Dichloropropane	2	ND	MTBE	4	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

ANALYTICAL SURROGATE RECOVERY:

Dibromofluoromethane : 115.%
Toluene-d8 : 96.%
4-Bromofluorobenzene : 106.%

NOTES:

1 Detection limit raised due to high levels of contaminants. Sample run at a 50% dilution.
2 None detected

ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

EPA METHOD 8260 WATER MATRIX

CLIENT: Twin State Environmental Corp.
PROJECT NAME: Cross Roads Mobil
REPORT DATE: February 18, 1997
DATE SAMPLED: February 10, 1997
DATE RECEIVED: February 10, 1997
ANALYSIS DATE: February 15, 1997

PROJECT CODE: TSEC1945
REF.#: 99,860
STATION: MW-2
TIME SAMPLED: 13:25
SAMPLER: Rod Lindsay

Parameter	Detection Limit (ug/L)	Result (ug/L)
Benzene	1	15.2
Bromobenzene	1	ND[1]
Bromochloromethane	2	ND
Bromodichloromethane	1	ND
Bromoform	1	ND
Bromomethane	5	ND
n-Butylbenzene	1	ND
sec-Butylbenzene	1	3.4
tert-Butylbenzene	1	ND
Carbon Tetrachloride	1	ND
Chlorobenzene	1	ND
Chloroethane	5	ND
Chloroform	1	ND
Chloromethane	10	ND
2&4-Chlorotoluene	2	ND
Dibromochloromethane	1	ND
1,2-Dibromo-3-Chloropropane	2	ND
1,2-Dibromoethane	2	ND
Dibromomethane	2	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Dichlorodifluoromethane	10	ND
1,1-Dichloroethane	1	ND
1,2-Dichloroethane	1	ND
1,1-Dichloroethene	1	ND
cis-1,2-Dichloroethene	1	ND
trans-1,2-Dichloroethene	1	ND
1,2-Dichloropropane	1	ND
1,3-Dichloropropane	1	ND
2,2-Dichloropropane	1	ND
1,1-Dichloropropene	1	ND
cis-1,3-Dichloropropene	1	ND
trans-1,3-Dichloropropene	1	ND
Ethylbenzene	1	194.
Hexachlorobutadiene	5	ND
Isopropylbenzene	1	4.2
p-Isopropyltoluene	1	18.2
Methylene Chloride	5	ND
Naphthalene	5	33.3
n-Propylbenzene	1	3.4
Styrene	2	ND
1,1,1,2-Tetrachloroethane	2	ND
1,1,2,2-Tetrachloroethane	2	ND
Tetrachloroethene	1	ND
Toluene	1	17.7
1,2,3-Trichlorobenzene	2	ND
1,2,4-Trichlorobenzene	2	ND
1,1,1-Trichloroethane	1	ND
1,1,2-Trichloroethane	1	ND
Trichloroethene	1	ND
Trichlorofluoromethane	2	ND
1,2,3-Trichloropropane	1	ND
1,2,4-Trimethylbenzene	1	46.4
1,3,5-Trimethylbenzene	1	36.4
Vinyl Chloride	5	ND
Total Xylenes[2]	2	646.
MTBE	2	36.7

NUMBER OF UNIDENTIFIED PEAKS FOUND: >10

ANALYTICAL SURROGATE RECOVERY:

Dibromofluoromethane : 111.%
Toluene-d8 : 85.%
4-Bromofluorobenzene : 120.%

NOTES:

1 None detected
2 Value from a 10% dilution.

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LABORATORY REPORT

EPA METHOD 8260 WATER MATRIX

CLIENT: Twin State Environmental Corp.
PROJECT NAME: Cross Roads Mobil
REPORT DATE: February 18, 1997
DATE SAMPLED: February 10, 1997
DATE RECEIVED: February 10, 1997
ANALYSIS DATE: February 18, 1997

PROJECT CODE: TSEC1945
REF.#: 99,861
STATION: MW-3
TIME SAMPLED: 13:43
SAMPLER: Rod Lindsay

Parameter	Detection Limit (ug/L)	Result (ug/L)
Benzene	1	9.8
Bromobenzene	1	ND[1]
Bromochloromethane	2	ND
Bromodichloromethane	1	ND
Bromoform	1	ND
Bromomethane	5	ND
n-Butylbenzene	1	ND
sec-Butylbenzene	1	9.9
tert-Butylbenzene	1	ND
Carbon Tetrachloride	1	ND
Chlorobenzene	1	ND
Chloroethane	5	ND
Chloroform	1	ND
Chloromethane	10	ND
2&4-Chlorotoluene	2	ND
Dibromochloromethane	1	ND
1,2-Dibromo-3-Chloropropane	2	ND
1,2-Dibromoethane	2	ND
Dibromomethane	2	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Dichlorodifluoromethane	10	ND
1,1-Dichloroethane	1	ND
1,2-Dichloroethane	1	ND
1,1-Dichloroethene	1	ND
cis-1,2-Dichloroethene	1	ND
trans-1,2-Dichloroethene	1	ND
1,2-Dichloropropane	1	ND
1,3-Dichloropropane	1	ND
2,2-Dichloropropane	1	ND
1,1-Dichloropropene	1	ND
cis-1,3-Dichloropropene	1	ND
trans-1,3-Dichloropropene	1	ND
Ethylbenzene	1	9.1
Hexachlorobutadiene	5	ND
Isopropylbenzene	1	9.2
p-Isopropyltoluene	1	23.9
Methylene Chloride	5	ND
Naphthalene	5	ND
n-Propylbenzene	1	6.6
Styrene	2	ND
1,1,1,2-Tetrachloroethane	2	ND
1,1,2,2-Tetrachloroethane	2	ND
Tetrachloroethene	1	ND
Toluene	1	2.2
1,2,3-Trichlorobenzene	2	ND
1,2,4-Trichlorobenzene	2	ND
1,1,1-Trichloroethane	1	ND
1,1,2-Trichloroethane	1	ND
Trichloroethene	1	ND
Trichlorofluoromethane	2	ND
1,2,3-Trichloropropane	1	ND
1,2,4-Trimethylbenzene	1	9.5
1,3,5-Trimethylbenzene	1	65.0
Vinyl Chloride	5	ND
Total Xylenes	2	5.9
MTBE	2	60.4

NUMBER OF UNIDENTIFIED PEAKS FOUND: >10

ANALYTICAL SURROGATE RECOVERY:

Dibromofluoromethane : 104.%
Toluene-d8 : 103.%
4-Bromofluorobenzene : 115.%

NOTES:
1 None detected

ENDYNE, INC.

Laboratory Services

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LABORATORY REPORT

EPA METHOD 8260 WATER MATRIX

CLIENT: Twin State Environmental Corp.
PROJECT NAME: Cross Roads Mobil
REPORT DATE: February 18, 1997
DATE SAMPLED: February 10, 1997
DATE RECEIVED: February 10, 1997
ANALYSIS DATE: February 15, 1997

PROJECT CODE: TSEC1945
REF.#: 99,862
STATION: MW-4
TIME SAMPLED: 13:58
SAMPLER: Rod Lindsay

Parameter	Detection Limit (ug/L)	Result (ug/L)	Parameter	Detection Limit (ug/L)	Result (ug/L)
Benzene	1	ND[1]	1,3-Dichloropropane	1	ND
Bromobenzene	1	ND	2,2-Dichloropropane	1	ND
Bromochloromethane	2	ND	1,1-Dichloropropene	1	ND
Bromodichloromethane	1	ND	cis-1,3-Dichloropropene	1	ND
Bromoform	1	ND	trans-1,3-Dichloropropene	1	ND
Bromomethane	5	ND	Ethylbenzene	1	TBQ[2]
n-Butylbenzene	1	ND	Hexachlorobutadiene	5	ND
sec-Butylbenzene	1	ND	Isopropylbenzene	1	ND
tert-Butylbenzene	1	ND	p-Isopropyltoluene	1	ND
Carbon Tetrachloride	1	ND	Methylene Chloride	5	ND
Chlorobenzene	1	ND	Naphthalene	5	ND
Chloroethane	5	ND	n-Propylbenzene	1	ND
Chloroform	1	ND	Styrene	2	ND
Chloromethane	10	ND	1,1,1,2-Tetrachloroethane	2	ND
2&4-Chlorotoluene	2	ND	1,1,2,2-Tetrachloroethane	2	ND
Dibromochloromethane	1	ND	Tetrachloroethene	1	ND
1,2-Dibromo-3-Chloropropane	2	ND	Toluene	1	ND
1,2-Dibromoethane	2	ND	1,2,3-Trichlorobenzene	2	ND
Dibromomethane	2	ND	1,2,4-Trichlorobenzene	2	ND
1,2-Dichlorobenzene	1	ND	1,1,1-Trichloroethane	1	ND
1,3-Dichlorobenzene	1	ND	1,1,2-Trichloroethane	1	ND
1,4-Dichlorobenzene	1	ND	Trichloroethene	1	ND
Dichlorodifluoromethane	10	ND	Trichlorofluoromethane	2	ND
1,1-Dichloroethane	1	ND	1,2,3-Trichloropropane	1	ND
1,2-Dichloroethane	1	ND	1,2,4-Trimethylbenzene	1	ND
1,1-Dichloroethene	1	ND	1,3,5-Trimethylbenzene	1	ND
cis-1,2-Dichloroethene	1	ND	Vinyl Chloride	5	ND
trans-1,2-Dichloroethene	1	ND	Total Xylenes	2	4.3
1,2-Dichloropropane	1	ND	MTBE	2	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

ANALYTICAL SURROGATE RECOVERY:

Dibromofluoromethane : 115.%
Toluene-d8 : 93.%
4-Bromofluorobenzene : 107.%

NOTES:

1 None detected
2 Trace below quantitation limit

ENDYNE, INC.

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LABORATORY REPORT

EPA METHOD 8260 WATER MATRIX

CLIENT: Twin State Environmental Corp.
PROJECT NAME: Cross Roads Mobil
REPORT DATE: February 18, 1997
DATE SAMPLED: February 10, 1997
DATE RECEIVED: February 10, 1997
ANALYSIS DATE: February 15, 1997

PROJECT CODE: TSEC1945
REF.#: 99,863
STATION: DUP-1
TIME SAMPLED: 13:40
SAMPLER: Rod Lindsay

Parameter	Detection Limit (ug/L)	Result (ug/L)
Benzene	1	17.2
Bromobenzene	1	ND[1]
Bromochloromethane	2	ND
Bromodichloromethane	1	ND
Bromoform	1	ND
Bromomethane	5	ND
n-Butylbenzene	1	ND
sec-Butylbenzene	1	2.2
tert-Butylbenzene	1	ND
Carbon Tetrachloride	1	ND
Chlorobenzene	1	ND
Chloroethane	5	ND
Chloroform	1	ND
Chloromethane	10	ND
2&4-Chlorotoluene	2	ND
Dibromochloromethane	1	ND
1,2-Dibromo-3-Chloropropane	2	ND
1,2-Dibromoethane	2	ND
Dibromomethane	2	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Dichlorodifluoromethane	10	ND
1,1-Dichloroethane	1	ND
1,2-Dichloroethane	1	ND
1,1-Dichloroethene	1	ND
cis-1,2-Dichloroethene	1	ND
trans-1,2-Dichloroethene	1	ND
1,2-Dichloropropane	1	ND
1,3-Dichloropropane	1	ND
2,2-Dichloropropane	1	ND
1,1-Dichloropropene	1	ND
cis-1,3-Dichloropropene	1	ND
trans-1,3-Dichloropropene	1	ND
Ethylbenzene	1	170.
Hexachlorobutadiene	5	ND
Isopropylbenzene	1	3.6
p-Isopropyltoluene	1	14.9
Methylene Chloride	5	ND
Naphthalene	5	41.6
n-Propylbenzene	1	2.9
Styrene	2	ND
1,1,1,2-Tetrachloroethane	2	ND
1,1,2,2-Tetrachloroethane	2	ND
Tetrachloroethene	1	ND
Toluene	1	17.9
1,2,3-Trichlorobenzene	2	ND
1,2,4-Trichlorobenzene	2	ND
1,1,1-Trichloroethane	1	ND
1,1,2-Trichloroethane	1	ND
Trichloroethene	1	ND
Trichlorofluoromethane	2	ND
1,2,3-Trichloropropane	1	ND
1,2,4-Trimethylbenzene	1	41.9
1,3,5-Trimethylbenzene	1	29.8
Vinyl Chloride	5	ND
Total Xylenes[2]	2	735.
MTBE	2	36.2

NUMBER OF UNIDENTIFIED PEAKS FOUND: >10

ANALYTICAL SURROGATE RECOVERY:

Dibromofluoromethane : 113.%
Toluene-d8 : 94.%
4-Bromofluorobenzene : 112.%

NOTES:

1 None detected
2 Value from a 10% dilution.

ENDYNE, INC.

Laboratory Services

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LABORATORY REPORT

EPA METHOD 8260 WATER MATRIX

CLIENT: Twin State Environmental Corp.
PROJECT NAME: Cross Roads Mobil
REPORT DATE: February 18, 1997
DATE SAMPLED: February 10, 1997
DATE RECEIVED: February 10, 1997
ANALYSIS DATE: February 15, 1997

PROJECT CODE: TSEC1945
REF.#: 99,864
STATION: F.B.
TIME SAMPLED: 13:00
SAMPLER: Rod Lindsay

Parameter	Detection Limit (ug/L)	Result (ug/L)	Parameter	Detection Limit (ug/L)	Result (ug/L)
Benzene	1	ND[1]	1,3-Dichloropropane	1	ND
Bromobenzene	1	ND	2,2-Dichloropropane	1	ND
Bromochloromethane	2	ND	1,1-Dichloropropene	1	ND
Bromodichloromethane	1	ND	cis-1,3-Dichloropropene	1	ND
Bromoform	1	ND	trans-1,3-Dichloropropene	1	ND
Bromomethane	5	ND	Ethylbenzene	1	ND
n-Butylbenzene	1	ND	Hexachlorobutadiene	5	ND
sec-Butylbenzene	1	ND	Isopropylbenzene	1	ND
tert-Butylbenzene	1	ND	p-Isopropyltoluene	1	ND
Carbon Tetrachloride	1	ND	Methylene Chloride	5	ND
Chlorobenzene	1	ND	Naphthalene	5	ND
Chloroethane	5	ND	n-Propylbenzene	1	ND
Chloroform	1	ND	Styrene	2	ND
Chloromethane	10	ND	1,1,1,2-Tetrachloroethane	2	ND
2&4-Chlorotoluene	2	ND	1,1,2,2-Tetrachloroethane	2	ND
Dibromochloromethane	1	ND	Tetrachloroethene	1	ND
1,2-Dibromo-3-Chloropropane	2	ND	Toluene	1	ND
1,2-Dibromoethane	2	ND	1,2,3-Trichlorobenzene	2	ND
Dibromomethane	2	ND	1,2,4-Trichlorobenzene	2	ND
1,2-Dichlorobenzene	1	ND	1,1,1-Trichloroethane	1	ND
1,3-Dichlorobenzene	1	ND	1,1,2-Trichloroethane	1	ND
1,4-Dichlorobenzene	1	ND	Trichloroethene	1	ND
Dichlorodifluoromethane	10	ND	Trichlorofluoromethane	2	ND
1,1-Dichloroethane	1	ND	1,2,3-Trichloropropane	1	ND
1,2-Dichloroethane	1	ND	1,2,4-Trimethylbenzene	1	ND
1,1-Dichloroethene	1	ND	1,3,5-Trimethylbenzene	1	ND
cis-1,2-Dichloroethene	1	ND	Vinyl Chloride	5	ND
trans-1,2-Dichloroethene	1	ND	Total Xylenes	2	ND
1,2-Dichloropropane	1	ND	MTBE	2	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

ANALYTICAL SURROGATE RECOVERY:

Dibromofluoromethane : 111.%
Toluene-d8 : 96.%
4-Bromofluorobenzene : 108.%

NOTES:
1 None detected

20441

ENDYNE, INC.

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333

CHAIN-OF-CUSTODY RECORD

Project Name: Cross Roads Mobil Site Location: Saxtons River, VT	Reporting Address: SAME AS →	Billing Address: 74 Huntington Rd. Richmond, VT 05477
Endyne Project Number: TSEC1945	Company: Twin States Env. Corp. Contact Name/Phone #: Ken Bisaglia	Sampler Name: Rod Livingston Phone #: 802-434-3350

Lab #	Sample Location	Matrix	GRAB	COMP	Date/Time	Sample Containers No.	Sample Containers Type/Size	Field Results/Remarks	Analysis Required	Sample Preservation	Rush
99,859	MW-1	L	X		2.10.97 1335	2	40ml VOA		8260	HCL ice	
99,860	MW-2	L	X		1325	2					
99,861	MW-3	L	X		1343	2					
99,862	MW-4	L	X		1358	2					
99,863	Dup-1	L	X		1340	2					
99,864	F.B.	L	X		1300	2	40ml VOA		8260	HCL ice	

Relinquished by: Signature	Received ~~by: Signature~~	Date/Time 2-10-97 3:10
Relinquished by: Signature	Received by: Signature	Date/Time

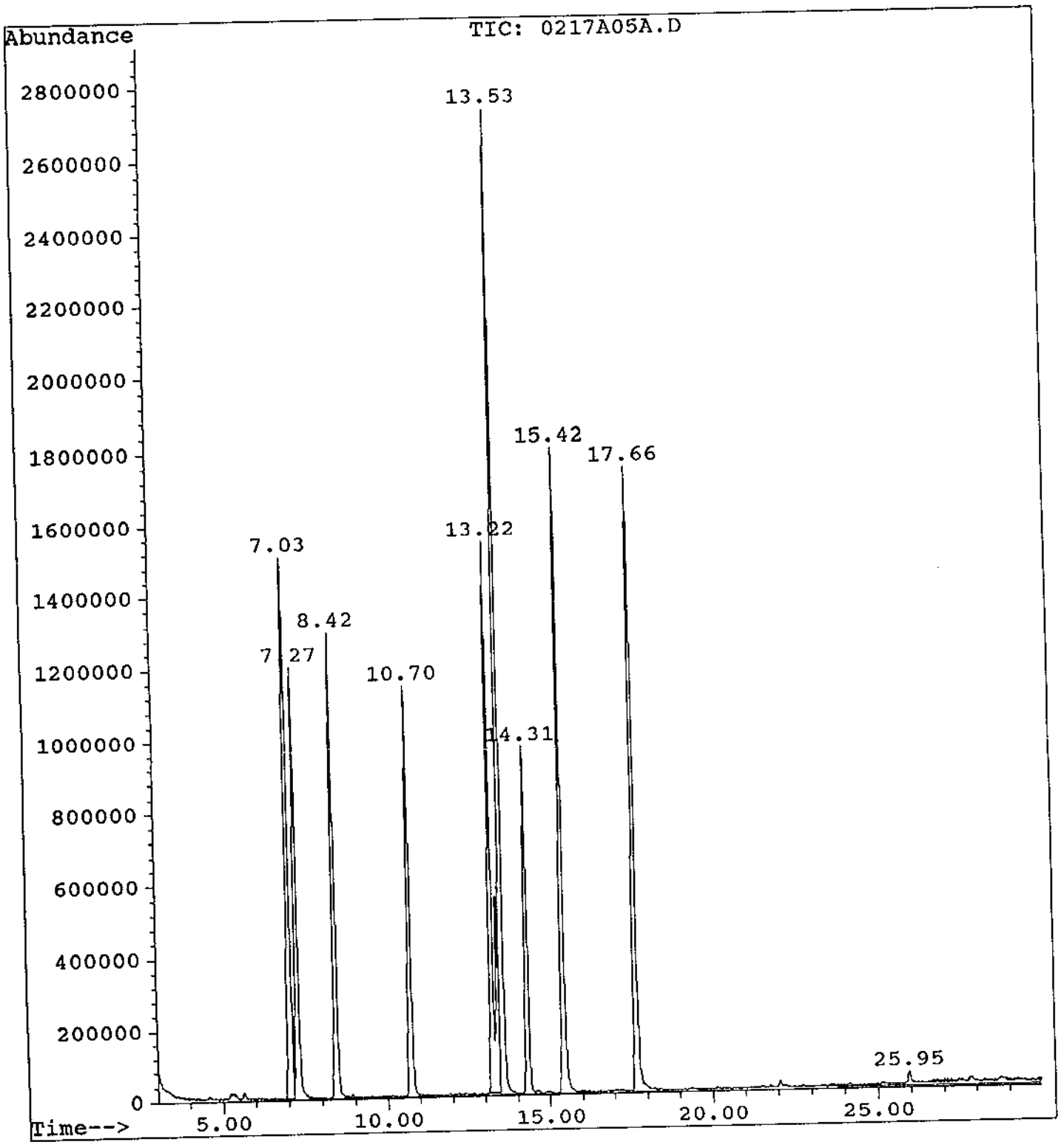
New York State Project: Yes ___ No ___

Requested Analyses

1	pH	6	TKN	11	Total Solids	16	Metals (Specify)	21	EPA 624	26	EPA 8270 B/N or Acid
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	EPA 625 B/N or A	27	EPA 8010/8020
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8080 Pest/PCB
4	Nitrite N	9	BOD_5	14	Turbidity	19	BTEX	24	EPA 608 Pest/PCB		
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240		
29	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										
30	Other (Specify):										

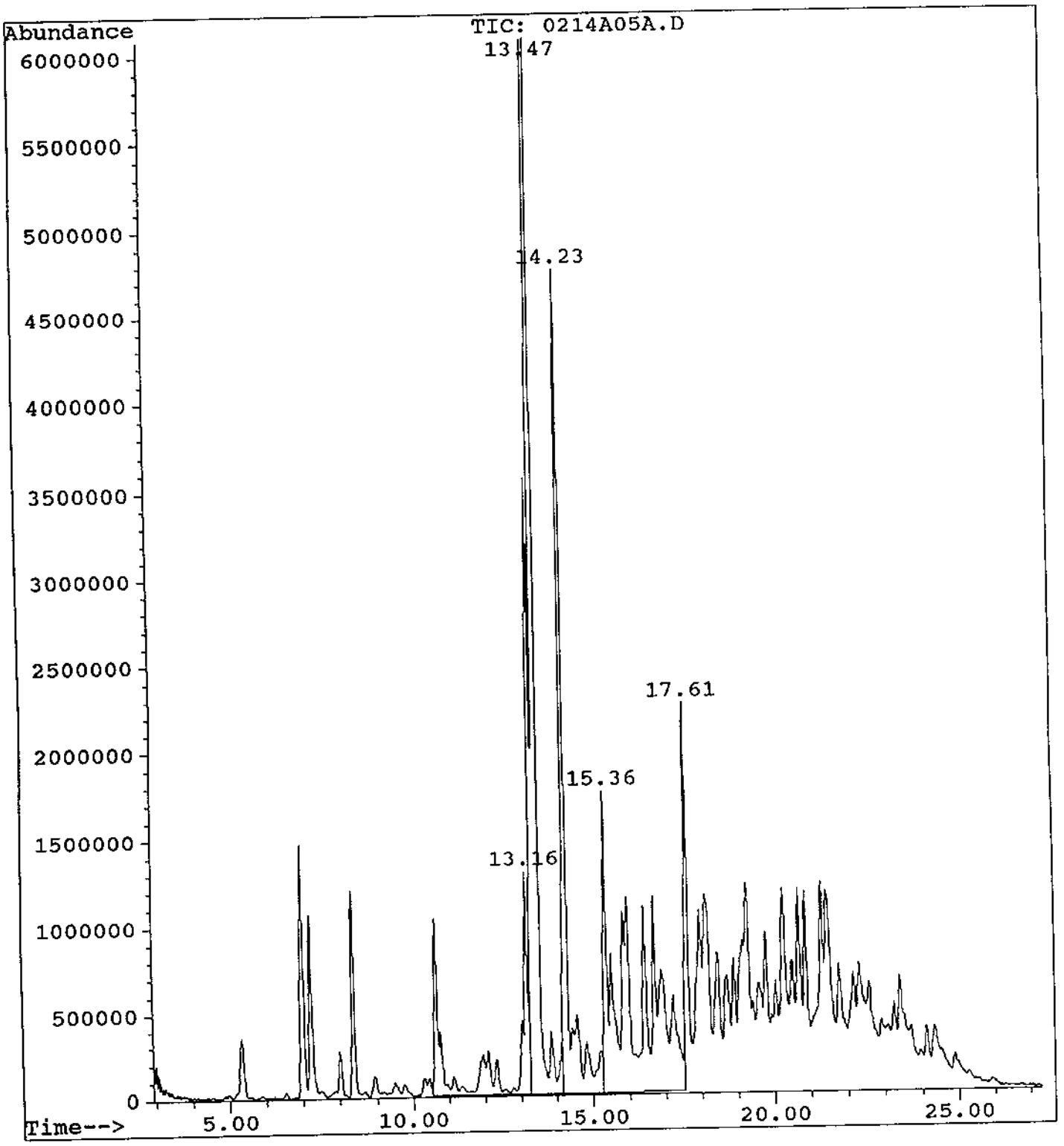
File : 0217A05A.D
Sample Name : 99859 50%
Current Method: TO2-0218.M
Instrument : MS_5970
Acquired : 18 Feb 97 12:11 am
Date of report: 02/20/97
Operator : ep

MW-1



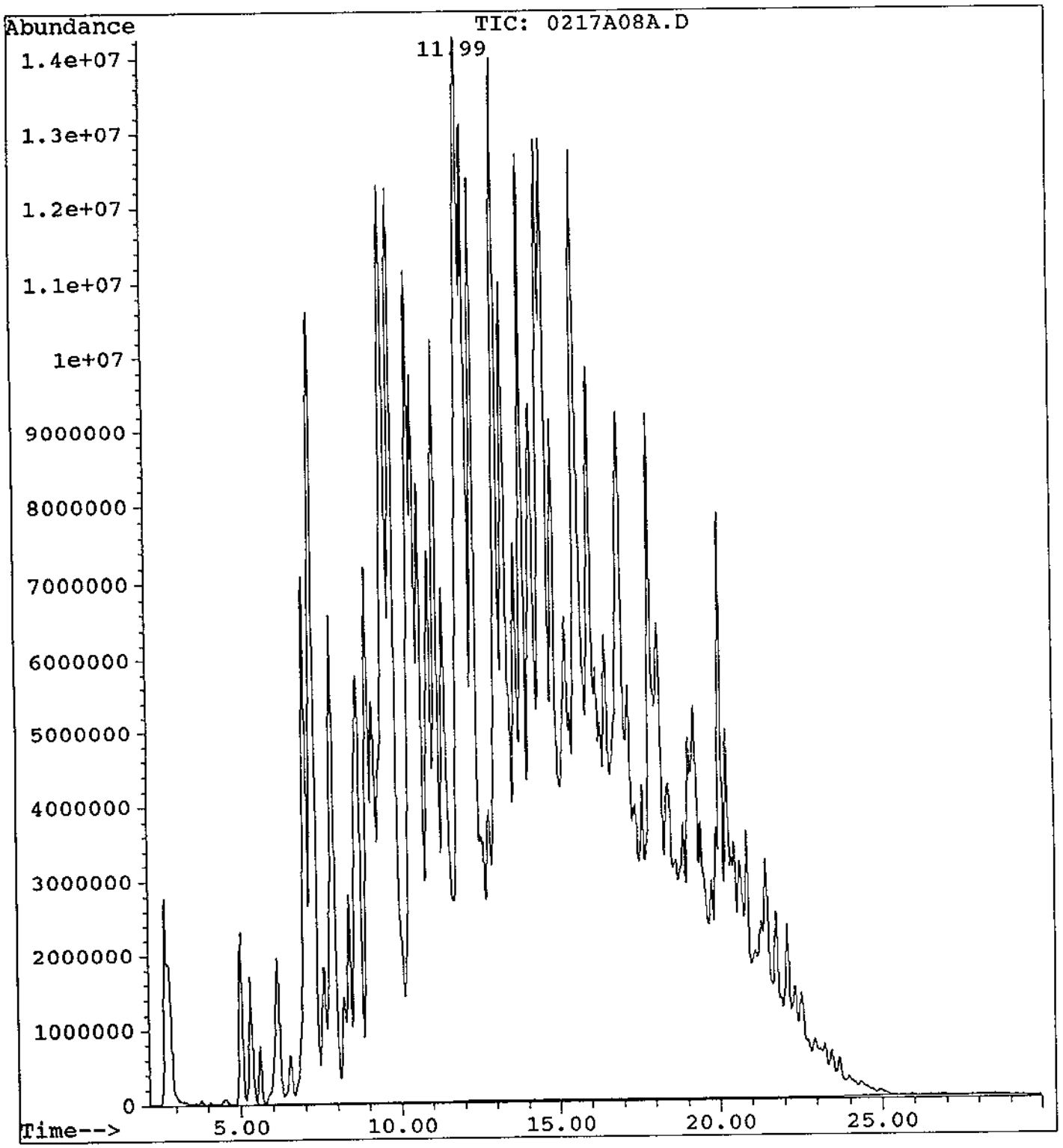
File : 0214A05A.D
Sample Name : 99860 100%
Current Method: TO2-0218.M
Instrument : MS_5970
Acquired : 15 Feb 97 2:38 am
Date of report: 02/20/97
Operator : ep

mw-1

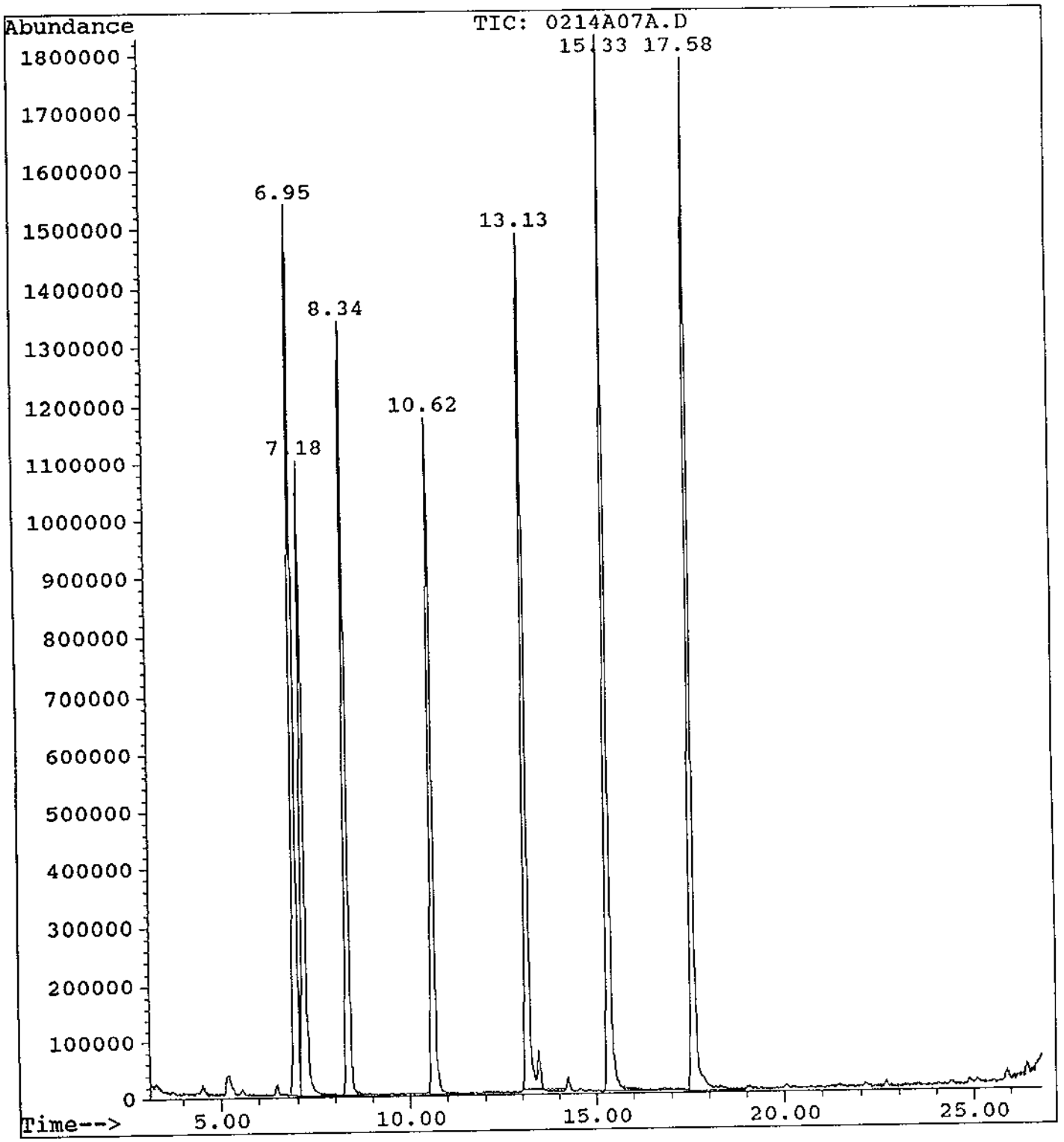


File : 0217A08A.D
Sample Name : 99861 100%
Current Method: TO2-0218.M
Instrument : MS_5970
Acquired : 18 Feb 97 2:47 am
Date of report: 02/20/97
Operator : ep

MW-3

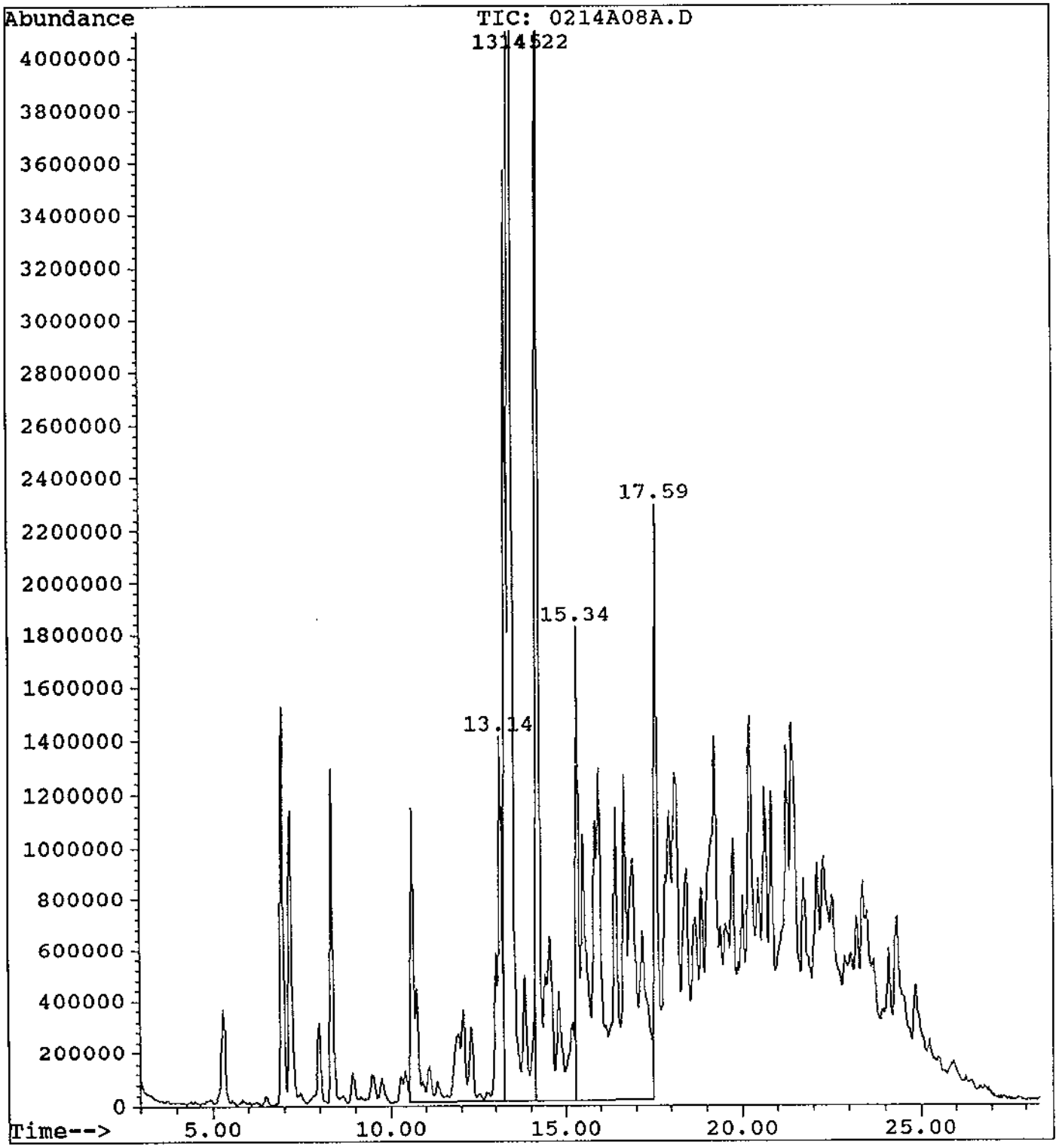


File : 0214A07A.D
Sample Name : 99862 100% MW-4
Current Method: TO2-0218.M
Instrument : MS_5970
Acquired : 15 Feb 97 4:22 am
Date of report: 02/20/97
Operator : ep

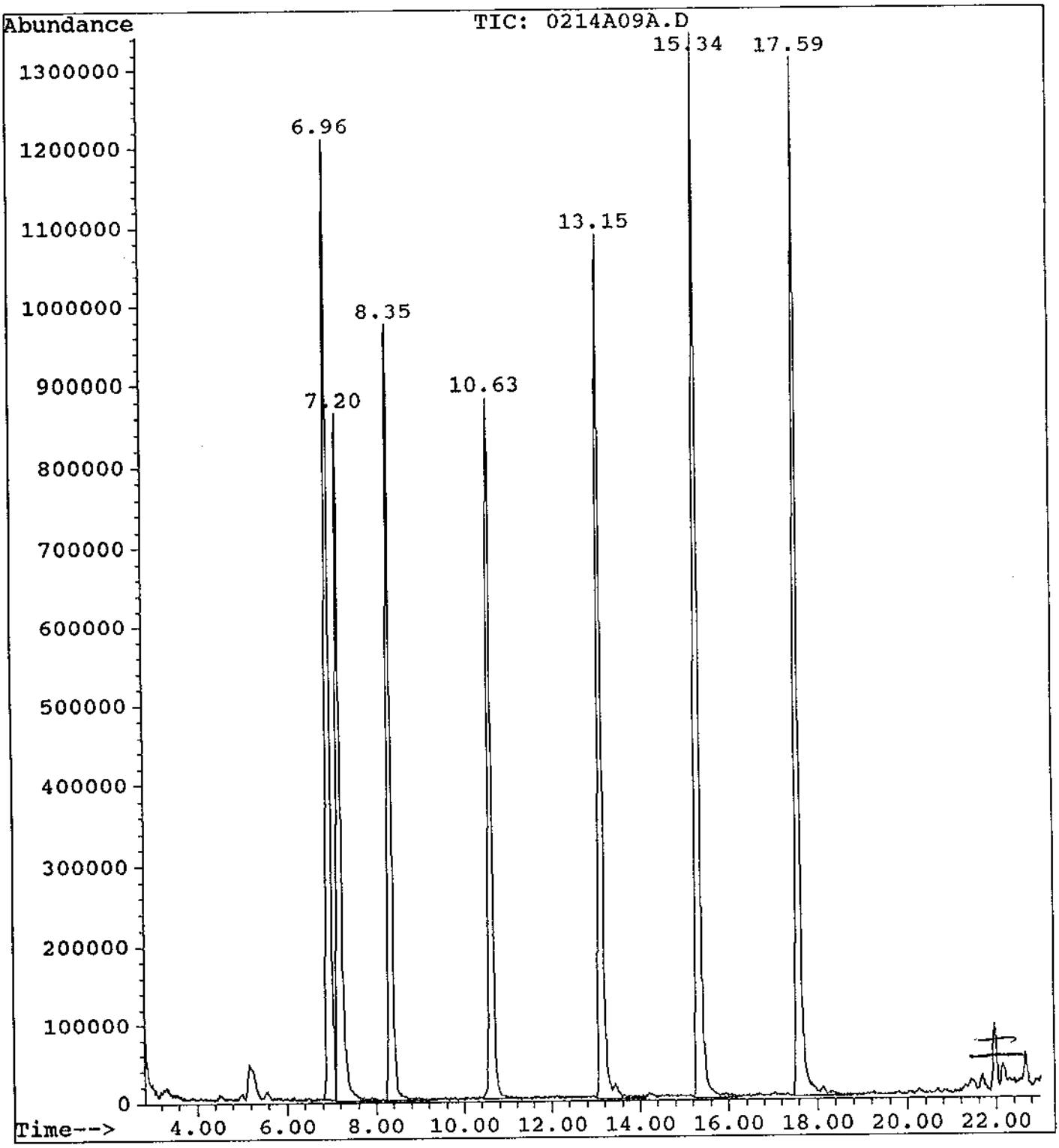


File : 0214A08A.D
Sample Name : 99863 100%
Current Method: TO2-0218.M
Instrument : MS_5970
Acquired : 15 Feb 97 5:14 am
Date of report: 02/20/97
Operator : ep

Duplicate

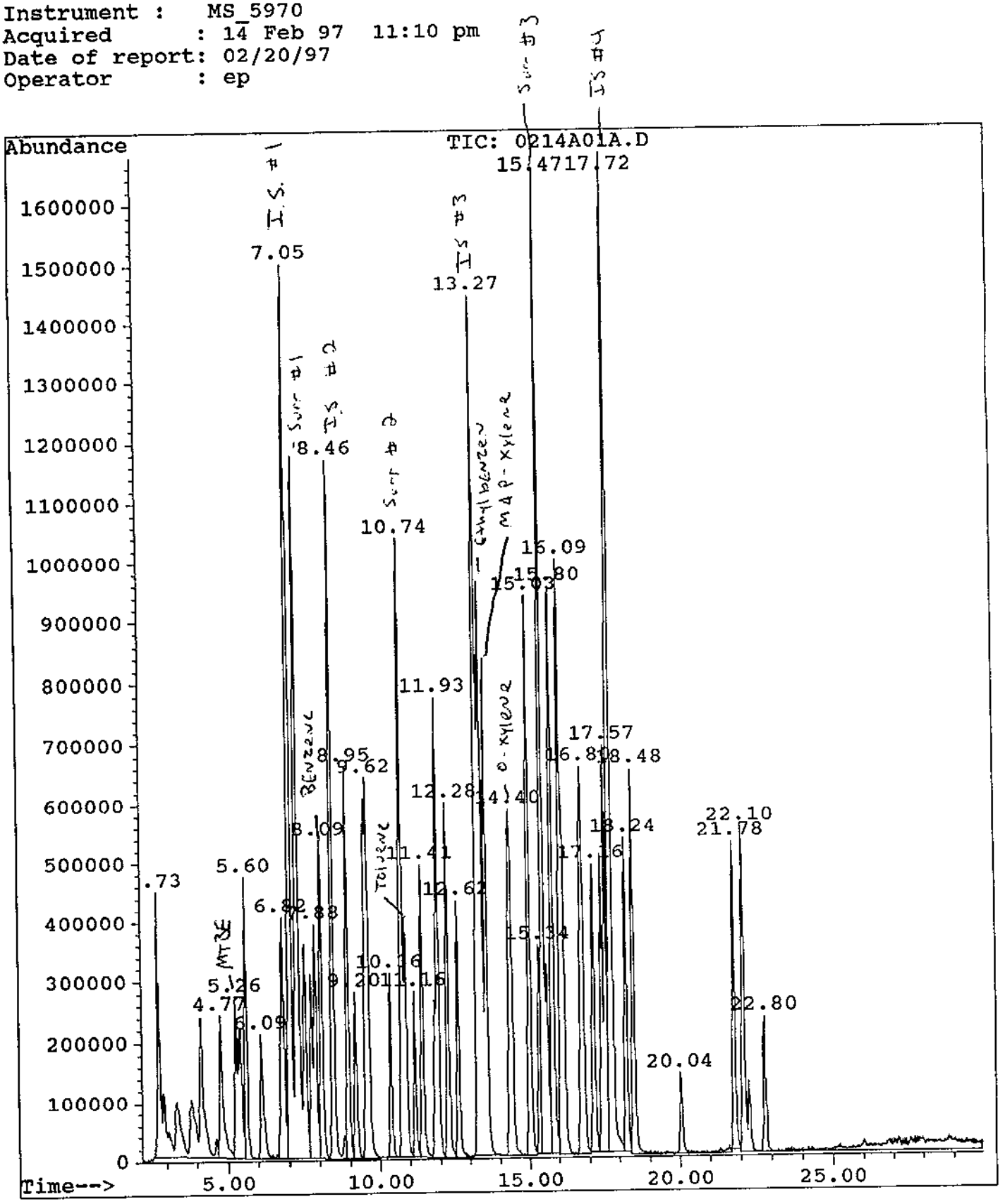


File : 0214A09A.D
Sample Name : 99864 100% Field Blank
Current Method: TO2-0218.M
Instrument : MS_5970
Acquired : 15 Feb 97 6:06 am
Date of report: 02/20/97
Operator : ep



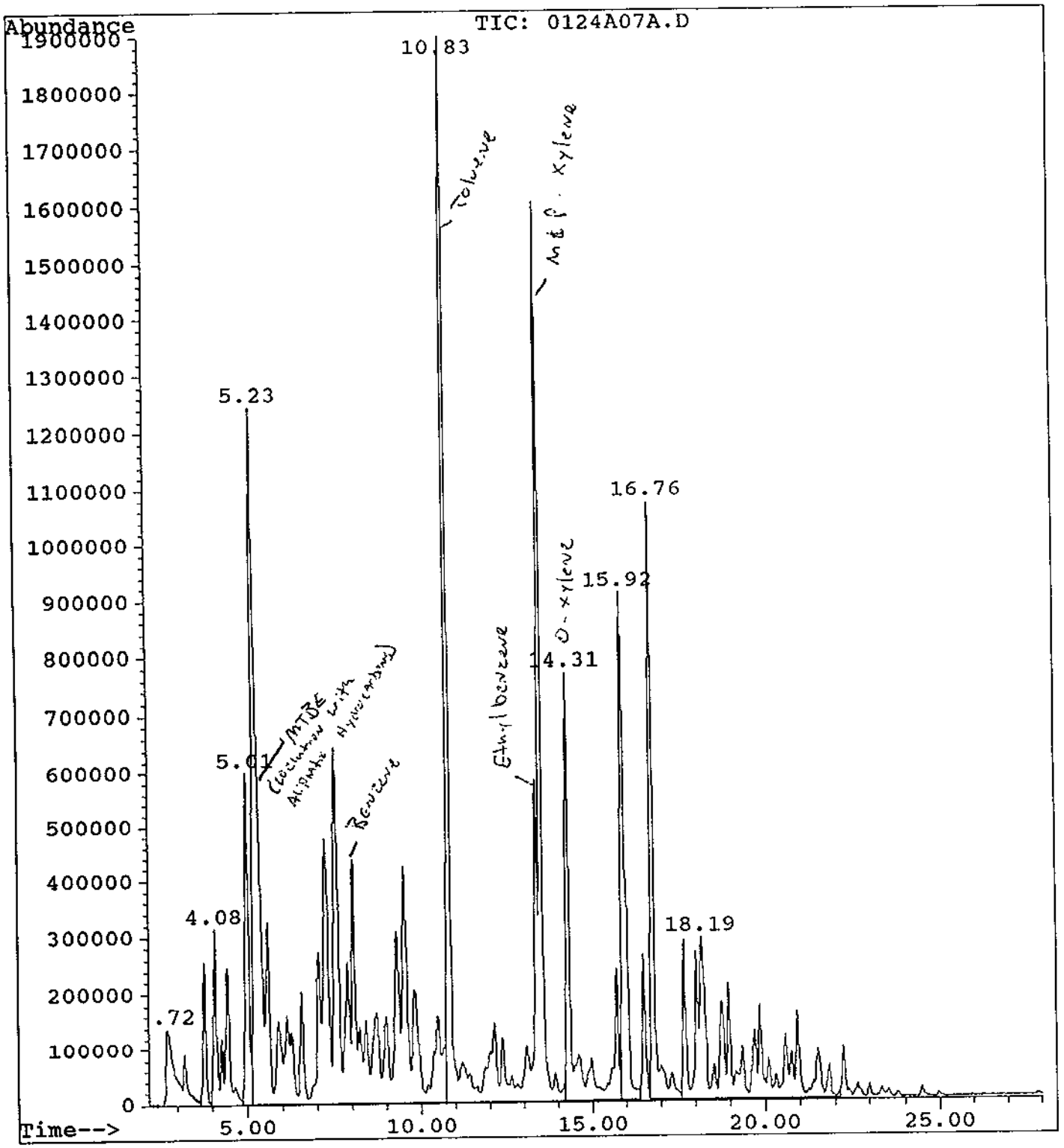
20ppb Line Check Standard
EPA method 8260

File : 0214A01A.D
Sample Name : 20ppb cal std 8260
Current Method: TO2-0218.M
Instrument : MS_5970
Acquired : 14 Feb 97 11:10 pm
Date of report: 02/20/97
Operator : ep



File : 0124A07A.D
Sample Name : 25ug gas
Current Method: TO2-0218.M
Instrument : MS_5970
Acquired : 24 Jan 97 6:01 pm
Date of report: 02/20/97
Operator : ep

25 ug Gasoline Standard (Reg. Unleaded)
No Internal Std / Surrogate Added



APPENDIX D

ENDYNE, INC.

Laboratory Services

32 James Brown Drive
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(802) 879-4333
FAX 879-7103

REPORT OF LABORATORY ANALYSIS

CLIENT: Twin State Environmental Corp.
PROJECT NAME: Crossroads Mobil
DATE REPORTED: February 5, 1997
DATE SAMPLED: February 3, 1997

PROJECT CODE: TSEC1855
REF. #: 99,570

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody record.

Chain of custody indicated no sample preservation.

All samples were prepared and analyzed by requirements outlined in the referenced methods and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced methods.

Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy were monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Individual sample performance was monitored by the addition of surrogate analytes to each sample. All surrogate data was determined to be within Laboratory QA/QC quidelines unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

enclosures

ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
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LABORATORY REPORT

EPA METHOD 524.2

CLIENT: Twin State Environmental Corp.
PROJECT NAME: Crossroads Mobil
REPORT DATE: February 5, 1997
DATE SAMPLED: February 3, 1997
DATE RECEIVED: February 4, 1997
ANALYSIS DATE: February 5, 1997

PROJECT CODE: TSEC1855
STATION: SW-1
REF. #: 99,570
TIME SAMPLED: 1415
SAMPLER: John Diego

Parameter	Detection Limit(ug/L)	Maximum Contaminant Level (ug/L)	Concentration (ug/L)
Benzene	0.5	5.0	ND[1]
Bromobenzene	0.5	------	ND
Bromochloromethane	0.5	------	ND
Bromomethane	0.5	------	2.9
n-Butylbenzene	0.5	------	ND
sec-Butylbenzene	0.5	------	ND
tert-Butylbenzene	0.5	------	ND
Carbon tetrachloride	0.5	5.0	ND
Chlorobenzene	0.5	100.	ND
Chloroethane	0.5	------	ND
Chloromethane	0.5	------	7.3
(2&4)Chlorotoluene	1.0	------	ND
1,2-Dibromo-3-chloropropane	1.0	0.2	ND
1,2-Dibromoethane	0.5	0.05	ND
Dibromomethane	1.0	------	ND
1,2-Dichlorobenzene	0.5	600.	ND
1,3-Dichlorobenzene	0.5	------	ND
1,4-Dichlorobenzene	0.5	75.0	ND
Dichlorodifluoromethane	0.5	------	ND
1,1-Dichloroethane	0.5	------	ND
1,2-Dichloroethane	0.5	5.0	ND
1,1-Dichloroethene	0.5	7.0	ND
cis-1,2-Dichloroethene	0.5	70.0	ND
trans-1,2-Dichloroethene	0.5	100.	ND
Dichloromethane	1.0	5.0	ND
1,2-Dichloropropane	0.5	5.0	ND

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REF.#: 99,570

Parameter	Detection Limit(ug/L)	Maximum Contamination Level(ug/L)	Concentration (ug/L)
1,3-Dichloropropane	0.5	------	ND
2,2-Dichloropropane	0.5	------	ND
1,1-Dichloropropene	0.5	------	ND
cis-1,3-Dichloropropene	0.5	------	ND
trans-1,3-Dichloropropene	0.5	------	ND
Ethylbenzene	0.5	700.	ND
Hexachlorobutadiene	0.5	------	ND
Isopropylbenzene	0.5	------	ND
4-Isopropyltoluene	0.5	------	ND
Naphthalene	1.0	------	ND
n-Propylbenzene	0.5	------	ND
Styrene	0.5	100.	ND
1,1,1,2-Tetrachloroethane	0.5	------	ND
1,1,2,2-Tetrachloroethane	1.0	------	ND
Tetrachloroethene	0.5	5.0	ND
Toluene	0.5	1,000.	ND
1,2,3-Trichlorobenzene	0.5	------	ND
1,2,4-Trichlorobenzene	0.5	70.0	ND
1,1,1-Trichloroethane	0.5	200.	ND
1,1,2-Trichloroethane	0.5	------	ND
Trichloroethene	1.0	5.0	ND
Trichlorofluoromethane	1.0	------	ND
1,2,3-Trichloropropane	0.5	------	ND
1,2,4-Trimethylbenzene	0.5	------	ND
1,3,5-Trimethylbenzene	0.5	------	ND
Vinyl Chloride	0.5	2.0	ND
Total Xylenes	1.0	10,000.	ND
MTBE	1.0	------	ND

NUMBER OF UNIDENTIFIED PEAKS: 0

Analytical Surrogate Recovery:

4-Bromofluorobenzene:	105.%
1,2-dichlorobenzene-d4:	87.%

NOTES:

1 None Detected

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LABORATORY REPORT

TRIHALOMETHANES BY EPA METHOD 524.2

CLIENT: Twin State Environmental Corp.
PROJECT NAME: Crossroads Mobil
REPORT DATE: February 5, 1997
DATE SAMPLED: February 3, 1997
DATE RECEIVED: February 4, 1997
ANALYSIS DATE: February 5, 1997

PROJECT CODE: TSEC1855
STATION: SW-1
REF. #: 99,570
TIME SAMPLED: 1415
SAMPLER: John Diego

Parameter	Detection Limit (ug/L)	Maximum Contamination Level (ug/L)	Concentration (ug/L)
Bromodichloromethane	0.5	----	12.0
Bromoform	0.5	----	4.2
Chloroform	0.5	----	18.6
Dibromochloromethane	0.5	----	11.4
Total Trihalomethanes		100.	46.2

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

ANALYTICAL SURROGATE RECOVERY:

4-Bromofluorobenzene:	105.%
1,2-Dichlorobenzene-d4:	87.%

ENDYNE, INC.

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CHAIN-OF-CUSTODY RECORD

Project Name: CROSSROADS MOBIL Site Location: ALBURG, VT	Reporting Address: P.O. BOX 719 RICHMOND, VT	Billing Address: SAME AS ←
Endyne Project Number: TSEC 1855	Company: TSEC Contact Name/Phone #: JON BERNTSEN 434-3350	Sampler Name: JOHN DIEGO Phone #: 434-3350

Lab #	Sample Location	Matrix	GRAB	COMP	Date/Time	Sample Containers No.	Sample Containers Type/Size	Field Results/Remarks	Analysis Required	Sample Preservation	Rush
99570	SW-1	WATER	✓		2/3/97/1415	2	40ml/VOA		524	NONE	

Relinquished by: Signature Jon P. Bern	Received by: Signature Tige Cunningham	Date/Time ~~2/3/97~~ TC 2/4/97 12:54pm
Relinquished by: Signature	Received by: Signature	Date/Time

New York State Project: Yes ____ No ____

Requested Analyses

1	pH	6	TKN	11	Total Solids	16	Metals (Specify)	21	EPA 624	26	EPA 8270 B/N or Acid
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	EPA 625 B/N or A	27	EPA 8010/8020
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8080 Pest/PCB
4	Nitrite N	9	BOD_5	14	Turbidity	19	BTEX	24	EPA 608 Pest/PCB		
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240		
29	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										
30	Other (Specify):										